

## PROCEEDINGS

### Armed Forces Epidemiological Board Winter Meeting: Honolulu, Hawaii February 6-8, 2001

**Tuesday, 06 February 2001**  
**Hale Ikena, Fort Shafter**

**(0800)**

**{Transcription: Tape 1}**

#### **OPENING AND ADMINISTRATIVE REMARKS**

**COL Ben Withers:** Ok, let me go through some administrative announcements here. Again, good morning and welcome to the AFEB winter meeting. I would like to recognize some of our honored guests this morning, although they may not be here right at the moment, but I'm going to go through and mention them: General Adams, our host, commander of the Army's Pacific Regional Medical Command and Tripler Medical Center; Admiral Wright, the US PACOM surgeon, COL Evenson is here representing Admiral, Dr. Zimble, president of the Uniformed Services University. COL Jarboe is here representing GEN Parker, commander of Medical Research and Materiel Command. And finally, Brig. GEN Griffin, commander of Second Medical Brigade. Welcome honored guests. Special thanks to Tripler again for hosting and again to our protocol officer Ms. Rogers, MAJ White and COL Takafuji for their special help. I do want to thank also at this time Ms. Jean Ward the administrative assistant of the AFEB. Ms. Ward can't travel great distances and isn't here today, but she's the backbone of this meeting and really did a lot of the work back at the office to get things ready, and as you know, she communicates with you board members frequently, so thank you Mrs. Ward.

I'm going to let Dr. LaForce introduce the six new members and he's also going to introduce the members of the board. Attendees make sure you sign in at some point during the morning. Our sign-in list is just out the back where the reception table was. As you know we've provided continental breakfast and then lunch is here also. If either COL Diniega or I give you a ticket, then it's provided. If not, see either MAJ White or myself and you can pay us for that. Again Thursday's lunch will be at Tripler Mess and please have \$3.50 available. We'll collect that either before or after. A reminder to all board members again, fill out your vouchers. Take a look at it this week. If you have any questions ask me, or COL Diniega, we'll help you with that. And remember Block 19 just to record the lunches you've eaten here, that's today and tomorrow. If you have any travel glitches or you want to make rearrangements, call the Carlson 800 number, which is on your itinerary. Now our next meeting, looking forward, our next meeting is going to be two, well, there's a total of five days here, three days one week and two the next, our first choice would be to have it on any two days of May 22 through 24, that's a Tuesday through a Thursday, so board members either write a little note to me or send an email note to Mrs. Ward and let her know your preference. Plan B or the second alternate is the next week. Now there's no choice here, that's got to be the 30<sup>th</sup> and the 31<sup>st</sup>. So again, 22 through 24 May, it can be 22, 23 or 23, 24, so that's our first choice, and the second choice will be 30 and 31. If you have any questions, I'll take those later too.

Again just to review today's social agenda, today is our bus tour, we'll be using small vans and cars if we have any overflow. Make sure you sign up so that, I

have the list right in my seat, so come by any time this morning and sign up so we have a decent idea of how many people would like to go. We're going to depart from here and go back to the hotel, change and leave the hotel, I think at 3:30, but I'll go over that detail again later. Then tonight, we're going to meet at the hotel at 7 o'clock, as I recall, I'll firm this up, then walk to dinner or drive. Subcommittees will meet Thursday morning, the meetings will be small, the board as we're a little bit small, and the meeting spaces are all right there together in the Tripler Conference Room up on the tenth floor, it's a very nice place. And so all the subcommittees will be meeting in the same general area Thursday morning. We have one formal question to the board, and that is the ongoing update and review on DOD ergonomics efforts. I'll remind speakers to stay on time, especially today. It's very important. Wednesday we don't have to be so strict. And Thursday we can be fairly loose, but today all speakers must stay on time and Dr. LaForce and I will have to remind you if you run over. Remind you that the meeting is being transcribed, that's a requirement, so when you speak, make sure you are near a microphone.

Do I see...I don't see any microphones on the head table yet. (Tech: There are microphones that can pick everybody up). Oh ok, fine so our AV gentleman will make sure we're doing the right thing. Don't get flustered if that happens, make sure we can be heard and recorded. If you have handouts, give them either to COL Diniega or myself. We'll distribute them for you. And lastly, be aware this is an open meeting. We may not know if there are reporters or other members of the press present, so just be reminded that this is an open meeting and that's possible. Ok, Dr. LaForce why don't you make some introductions.

**Dr. LaForce:** Thanks Colonel. Again, good morning to everyone. What I thought I would do is begin because we have several new board members to have individuals introduce themselves. And if you could just say a word or two in terms of what you presently do and the expertise that you bring to the board. And I'm going to start on that side with Kevin Patrick and then just sort of work our way around. Kevin.

**Kevin Patrick:** I'm Kevin Patrick, San Diego, currently director of student health center of San Diego State University and professor of Public Health at the School of Public Health at San Diego State and director of the preventive medicine training program sponsored between our School of Health San Diego State and the School of Medicine at UC San Diego. I'm also the editor in chief of the American Journal of Preventive Medicine. And I've been doing that for the last five years

**John Herbold:** Good morning, my name is John Herbold I'm on the faculty at the University of Texas-Houston Science Center School of Public Health. I am part of the Border Campus and physically located in San Antonio on the UT-HSC San Antonio campus. I teach the introduction to Epidemiology course for our MPH students and offer other courses throughout the academic year. My interests are and have always been the practice of public health: on active duty with the Air Force for 24 years; assignments overseas: a tour with the Office of the Assistant Secretary of Defense for Health Affairs; and am currently involved in community based activities concerning environmental contamination and also zoonotic disease control.

**COL Withers:** Can I just interrupt for a second? We're going to try to get some more microphones up but members of this table, please speak up so that we can pick you up on the microphones and by people in the audience. Thank you.

**Dr. Rosemary Sokas:** Rosemary Sokas, Associate Director for Science for the National Institute for Occupational Safety and Health CDC, and I've been on the board for awhile, so.

**Dr. LaForce:** I'm Dr. LaForce, an academic career for thirty years at Harvard, Colorado and lastly University at Rochester, where I've also held a clinical appointment as a Professor of Medicine there. Long interested in vaccinology and disease prevention and health promotion and it's my great privilege to serve as president of this group.

**Dr. Ostroff:** Steve Ostroff. I'm the Associate Director for Epidemiology at the National Center for Infectious Diseases. And the way I usually explain it is that I'm the guy who does the organization at the outbreak of investigation that the CDC does and I also have responsibility for the bio-terrorism group that deals with anti-biotic resistance and deals with safety. And that's what keeps me busy.

**Dr. Alexander:** Good morning, I'm Linda Alexander and I'm president of ASHA, the American Social Health Association, a national non-profit organization that deals with a cross section of sexually transmitted diseases. You may know us from running the national AIDS hotline, the national STD hotline contracted through the CDC. Also retired Army Nurse Corps. My last assignment was nurse epidemiologist at WRAIR.

**Dr. Shanahan:** I'm Dennis Shanahan. I retired from the army in 1997, and have recently started my own consulting company in Carlsbad, California. My background is in the investigation and analysis of injuries and injury mechanisms in crashes of aircraft and motor vehicles. I have also focused on the study of human tolerance to impact and biomechanics and in the development and testing of protective equipment to prevent injuries in crashes.

**Dr. Campbell:** My name is Doug Campbell. I'm in private practice doing basically clinical occupational medicine. My background is in epidemiology and public health first at a CDC as an EIS officer then at the State Health Department doing environmental public health. So my now then is to promote health in the workplace and to see what we can do to keep people healthy in the workplace.

**Dr. LaForce:** And Elizabeth Barrett-Connor, who will be here tomorrow. Without further ado let me ask MG Adams, the commander of Tripler Army Medical Center, as well as the head of the Pacific Regional Medical Command to make a few more comments, and again thank you so very much for the beautiful reception last night.

## **WELCOME**

**MG Adams:** Thank you Dr. LaForce. I've decided to use the microphone because my voice is still not back to the quality that it usually is. But it is my pleasure to welcome the AFEB to Hawaii, to Tripler, to the Pacific Region. And I first became acquainted with AFEB when I was in Washington. I was the commander of the Center for Health Promotion and Preventive Medicine, and I had the privilege to be the first commander of that organization, of what had formerly

been the Army Environmental Hygiene Agency and had the task of reengineering or changing the agency into a new entity, and of course for the issues that are represented with AFEB, you all have a primary interest in organizations that deal with health promotion and preventive medicine, so it was a very good introduction to me in terms of the historic nature of AFEB as well as the expertise that is represented in this room as well as the colleagues who have preceded you.

So I'm very excited now that I'm out here in the Pacific to welcome you to Hawaii and to Tripler Medical Center and one of the lessons I have learned, and primarily by my experience with CHPPM is how difficult it is for the issues that are in the realm of preventive medicine to compete with the ordinary high risk nature of medical and surgical conditions that health care professionals deal with on a day to day basis, so I see this entity as being very important because you help us focus on the priorities before we get into crisis situations which in most cases in preventive medicine they'd be public health concerns that go way beyond the scope of the initial problem, so indeed to see it all come together in our area, not only to be able to share with you your expertise, but also to hear from us in the Pacific region what our concerns are and I would suggest that the concerns in the Pacific region are really concerns for the world, first of all because of the size of the region that we represent, essentially about half of the world and I know most of that is water, but there are a lot of people that are dispersed around the area, but because of the shrinking nature of our world, something that is a problem today in the Pacific could be in New York City tomorrow and then it would definitely become something we would have to deal with on a national basis.

And for our service men and women who are out here, living in Hawaii is a great environment, very pristine and very safe, but we are deployed to all areas of the Pacific where there are problems, some that have gone on for ages such as malaria and others that are emerging diseases that we're not even prepared to deal with, so I look forward to having the AFEB become knowledgeable with the priorities that we are addressing here in the Pacific, and we've got some expert speakers this morning representing the Army, the Navy, and the Air Force who will talk to you in terms of what their priorities are. You'll probably hear some repetition because we all take credit for the vast geography that we cover and the numerous time zones that have to be accommodated, but that kind of gives you the flavor of the area in which we live and work on a day-to-day basis. So I don't want to take any more of your time because you have lots of work to do, and we look forward to hearing from you as well as sharing information that is relevant to the ongoing mission of the AFEB.

So I thank you for taking the time and the extra effort to come out to Hawaii. It's nice once you get here, but it does take awhile to make the trip. I apologize. This is not my day-to-day health care professional attire. I'm usually in a Class B uniform like the major is here, but I'm going to have to share the afternoon with Pacific Warrior again with GEN Griffin, and this is the only uniform that does well in that red mud up there. (Hua!) That's all right, Admiral Wright is going out to the Pacific Warrior also with me this afternoon, so we have a kind of hectic agenda, but again welcome and thank you for your time and effort to come out here and learn about the Pacific area of responsibility. Thank you.



**COL Withers:** Dr. Patrick did not get presented with a lei, last night so would you come forward.

**MG Adams :** Oh, OK.

**COL Patrick:** Can I wear this all day?

**(Unknown)** Yeah. It's a lot more attractive than the rest of us.

**COL Withers:** The next speaker is the surgeon for the US Pacific Command, Rear Admiral Wright.

### **PACOM BRIEF**

**RADM Wright:** Good morning. On behalf of Admiral Dennis Blair, the commander and chief of US Forces Pacific, welcome to the Pacific AOR. I'd like to thank the members of the Armed Forces Epidemiology Board for their service to the US forces and to the nation for helping to keep our people healthy, fit and prepared to carry out their mission, not only in this AOR, but throughout the world. Our briefing this morning which COL Navin, my deputy, will present in a few moments will give you an overview of the Pacific AOR, but I would like to take a few moments to tell you just how much we appreciate you coming out here. Our feeling here most of the time is that the nation, in particularly Washington tends to be Euro-centric in its feelings. So anytime we can get the folks out here in Hawaii AOR to see what this area is all about and what we do out here, we appreciate the opportunity. Admiral Blair talks about, though we did speak in terms of the US forces in the Pacific providing the security and the stability upon which economic progress could occur in the AOR with all of the nations out here. We're trying to get away from the word, stability, because that implies a permanence of the way, of the

status quo, and obviously there are some things in the AOR we would like to see changed along the lines of increased democratization so we're now using the term security rather than stability, but security to support peaceful change and economic development.

Our job out here, the US Forces Pacific, is to fight and win if that becomes necessary, but as we all know the best way to win is not to have to fight in the first place, so we spend a great deal of our effort in trying to avoid, to create an environment in which conflict becomes unnecessary. Now the way we do that is we have a three-pronged focus if you will of our efforts, one is readiness, being prepared to fight a war if necessary, the other is regional engagement, and the other prong is transformation of our forces for the military in the future through experimentation, change in the way we conduct our business. You will hear a little bit about that in the presentation COL Navin will make. As you hear from the other services you will hear about initiatives that they have ongoing. But traditionally the way we have operated is that when something would occur we would establish a joint task force to deal with that, that situation. We would take components from each of the component services, Army, Navy, Air Force, Marine Corps, kind of ad hoc those together under some component headquarters to form a force to go deal with the problem. That works pretty well if you've got plenty of time for that group to get together and form a team, but things are happening faster and faster, and we're trying to get our reaction time down and down, and so what we are working on in this AOR now is joint mission forces.

In the past we have tried to train component headquarters, third fleet, seventh fleet, first MEF, third MEF, First Corps to take on the joint task force headquarters function with augmentation that was pre-planned and pre-trained, but now we're trying to bring in the subordinate units to that and train the whole force as a joint mission force with several of those having areas of function and the like. First Corps is the Consequence Management JTF designated for this AOR, so if something happens that requires a consequence management response, First Corps would be the JTF command and would organize the other forces that would be part of that and to make up a joint mission force in response to it, so that we would train as we fight and when people responded to a contingency or a crisis, they would not have to get their organization together on the fly, because they would have trained and exercised previously to handle those, those situations.

At the same time it's Admiral Blair's philosophy that the way we should acquire and prepare for the military of the future is through adaptation today so that as we are training, going through our regular training and exercising is to be experimenting, not only with new technologies, but with new structures, new doctrine, new tactics and procedures. So it's a very active AOR. We have a lot going on out here, regional engagement, focuses on transnational issues, which of course include infectious diseases. The CINC talks about security communities, which kind of got off to a rough start because people saw that as encouraging the formation of national cliques, if you will of nations forming alliances that would be competitive with other nations and their alliances, but this is not the philosophy that the CINC is encouraging at all but rather one of a friendly neighborhood in which the

neighbors work together to solve the common problems, and in order to do that one feels that they need to practice it. While in the past, almost all of our mil to mil relations in the AOR have been volatile, and it is us with one nation, us with another nation, and we are working very hard to form multi-national organizations through our exercises rather than doing, going around and doing exercises with each of the countries but trying to have one exercise and bringing in multiple countries into that exercise, but dealing with issues that come up like East Timor through coalition forces and even trying to encourage other nations to take the lead as Australia did in East Timor, and our forces play a more supportive role. We're heavily engaged in the training of peacekeeping forces, of kind of training the trainer, if you will, and encouraging other nations to take on that role. So again it's a very active place, from your vantage, it's certainly a place where there are lots of infectious disease issues and you will be hearing a lot from NAMRU2 and AFRIMS of the efforts that are being made out here both in surveillance and in infectious disease research.

And again, welcome to our AOR. If there's anything we can do to make your visit more productive or pleasant while you're here, please don't hesitate to give us a holler. With that I'll turn it over to COL Navin, who will give you the standard Pacific Command Brief, which I'll remind you this is a brief we give everybody. It doesn't matter whether you are a civilian or military, whether you are U.S. or foreign, whether you are friendly foreign or not so friendly foreign, and we give the same presentation to everybody as far as the Pacific Command view of the AOR. One of our bedrock philosophies is transparency. We want friends and competitors

and adversaries and everybody else to understand exactly what we're about. I'll turn it over to COL Navin now.

**COL Navin:** Thank you, sir. We've got to be careful about the non-friendly foreign folks here. We have joint staff here. Good morning, I am COL Navin from the JO7, the PACOM Command Surgeon's Office. I will be briefing you on our mission in the Pacific Command region (next slide). The Asia Pacific Region with its large educated populations, wealth, technology, military forces, national heritages and ambitions is one of the world's most important and dynamic regions. The President of the United States assigns military responsibility for this region to the Commander in Chief, US Pacific Command. This briefing will describe the region, the organization, the focus and activities of this command (next slide).

**MG Adams:** Bill can I interrupt you with questions as you go along?

**COL Navin:** I prefer you go ahead and wait until after the briefing is over with and we'll shoot questions and go from there. The US Pacific Command area of responsibility contains 43 countries and over 105 million square miles, totaling 52 percent of the earth's surface (next slide). Much of the region is ocean, but it contains nearly 60 percent of the world's population, including the world's two most populous countries (next slide). The economies of the Asia Pacific Region generate nearly 26 percent of the world's total production. They include world-class high technology companies, along with world leaders in traditional sectors such as textiles and household goods (next slide). Dense traffic movement through the straits and the long coastlines characterize the shipping in the Asia Pacific Region. Over 1100 fully laden supertankers pass through the straits of Malacca each year (next slide).

Countries in this region field the world's six largest armed forces. Four of them also have nuclear arsenals. Conflict in the region would involve large-scale combat. Rich in resources, the Asia Pacific Region has serious potential flash points for crisis and conflict (next slide).

There are significant unresolved territorial and border disputes in the region. The demilitarized zone of Korea is the most heavily fortified border in the world. Intermittent naval engagements occur in the Spratleys. China maintains a threat of force against Taiwan. India and Pakistani troops clash routinely in the Kashmir. The Kuril and the Senkaku are claimed by two countries (next slide). Additionally, the governments and societies of major countries in the region are in transition. Two, North Korea and Burma are great nations swimming against the tide of history, repressing their people and threatening their neighbors. The historic Bahrain Summit may be a precursor of change in the peninsula, but the diplomatic initiatives by North Korea have not been matched by fundamental reform within the country. Indonesia is in transition from 35 years of strong man rule. China is in the midst of massive restructuring of its economy. Internal change within these countries has substantial external effects on the region (next slide). The strategic landscape also includes significant transitional threats. First is proliferation. There are four countries in the region with nuclear weapons capability and more with chemical and biological capability. This widespread capability increases the threat of weapons of mass destruction use. Next is terrorism. While significant, terrorist incidences in the Asia Pacific region trail those in other parts of the world. Terrorist related events show an increasing trend. Drug trafficking throughout the Asia Pacific region

continues to threaten the United States and other countries in the region, both at home and abroad.

Finally, infectious diseases. Throughout the region, agencies, such as the Navy Research Medical Unit and the Armed Forces Research Institute of Medicine provide visibility in diseases and conduct research on the causes, distribution and prevention. There are regular outbreaks of dengue, cholera and malaria. We will never eradicate disease within the Pacific, but through our research and teaching programs we may be able to reduce the potential for epidemic outbreaks. Rich in resources, full of potential flashpoints, the Asia Pacific Region matters to the United States (next slide). The US has strong historic commitment to the region and has fought three major wars in the Pacific over the past 100 years. Since World War II, more American servicemen have died here than any other region. Five of the seven US mutual defense treaties with Japan, South Korea, Thailand, the Philippines and Australia link us to countries in this region. The American economic stake in Asia is huge. One third of the US exports go to Asia and US foreign direct investment in Asia has quadrupled since 1987. According to the World Bank, developing Asian markets are projected to dominate the future profitability of US corporations. Asian Americans are the fastest growing heritage group in the country. This is the strategic landscape on which Pacific Command carries out its mission (next slide).

As the military component of the US influence in the Asia Pacific region, the Pacific Command has this mission. Each part of this mission statement is important and I will discuss each in turn (next slide). Ready forces are the foundations of Pacific Command strategy. There are numerically larger forces in the region. There

is none with the ready power of the Pacific Command. Ready forces involve the intellectual preparation of staffs, as much as the training of warriors and the maintenance of their equipment. Keeping forces ready involves both joint service and combined coalition exercises, which build inter-operability. Finally, ready US forces provide the security for peaceful development in the region. I will next describe the forces that make up the Pacific Command (next slide). First how are we organized? Admiral Blair, as the regional combatant commander reports to the Secretary of Defense, normally through the chairman of the Joint Chiefs. The Pacific Command forces are provided by the four service component commanders. These four, and three star commander headquarters are here in Hawaii. In Japan and South Korea for normal peacetime operations, regional sub-unified commanders coordinate their activities of Pacific Command forces and deal directly with the host governments and allied forces. The Alaskan commander coordinates the activities of Pacific command forces in that strategic sector of the Pacific. Special Operations forces are assigned a separate command (next slide). Army forces in the Pacific include Headquarters First Corps in Washington State, the 25<sup>th</sup> Infantry Division Light in Hawaii, and the 172<sup>nd</sup> Separate Infantry Brigade in Alaska. Additionally, the 2<sup>nd</sup> Infantry Division is forward deployed in Korea for a total of over 60,000 soldiers. Pacific air forces include four numbered air forces fielding about 300 tactical aircraft, 100 support aircraft and 40,000 airmen. The Pacific Fleet commands half of the Navy resources, roughly 130,000 sailors. Marine forces Pacific comprise two thirds of the operating strength of the Marine Corps, with the 1<sup>st</sup> Marine Expeditionary Force in California and the 3<sup>rd</sup> MEF in Japan, totaling



70,000 Marines. I will now show you how these forces are deployed in the area of responsibility (next slide).

These Pacific forces consist of forward deployed, forward based, and forces based in the Continental United States. Our overseas-deployed forces consist of forward station forces located primarily in the Republic of Korea and Japan, along with maritime forces afloat in the Western Pacific. We also rotationally deploy units overseas, such as Marines to Okinawa, Air Force squadrons to Singapore, and Navy patrol aircraft to Japan and Diego Garcia. The total overseas-deployed force is about 100,000 military personnel. Pacific Command also has forces forward based and home ported in Hawaii and Alaska. Finally, PACOM has forces on the west coast of the United States. These forces are an integral part of the Pacific Command. The total of all Pacific Command's forces is about 300,000 military personnel. This is the largest number of US military personnel dedicated to any region in the theater. These are our forces today. In the future, they will be even more dominant as we take advantage of new technology and concepts (next slide).

Preparing for tomorrow by implementing the concepts of Joint Vision 20/20 is the second component of our strategy. Joint Vision 20/20 is the conceptual template for the development of the future joint war fighting. Based on high quality people, and equipped with technology of the information revolution, the armed forces of the United States will be faster, more lethal, and more precise than today. We will achieve this vision by joint experimentation. Through joint experimentation we seek to leverage joint and combined operational concepts and technologies. We seek breakthroughs in joint and coalition war fighting as we transform our

operational schemes to the circumstances of the 21<sup>st</sup> century. As US CINCPAC and our allies and partners exploit the opportunities of the revolution in the military theaters, we ensure our objectives are met across the spectrum of major theater war, crisis response, and regional engagement.

I've described the Pacific Command forces and our plans for tomorrow. The heart of our mission is to fight and win. Nowhere in the Asia Pacific Region is the part of the mission more clear than on the Korean peninsula (next slide). For the past 50 years, the Republic of Korea and the United States have successfully checkmated a North Korean regime openly committed to a reunification of the peninsula by force. The US contribution to deterrence includes a mechanized division, an air force that's maintained at peak readiness. Ready to fall on these troops are powerful, naval, air and ground forces, some already in the Pacific, both ashore and afloat and others in the United States. The allied war fighting capability to defend its home continuously through realistic and demanding exercises such as Upchee Focus Lens and Four Eagle Exercises. There is no question that an attack by North Korean forces would be repulsed and would be the end of the North Korean regime. It is this war fighting capability that provides deterrence and ensures peace in the Korean peninsula (next slide). For contingency operations short of a major theater war, US CINCPAC stands up a joint task force commander who is on the scene. Under this commander, Admiral Blair assigns tailored forces from all four service components and Special Forces. In most cases the US will not be responding to a crisis alone. When we respond with our nations we either coordinate our forces, or we integrate them and form a combined joint task force (next slide). Several of our operational

commander's headquarters are designated and trained to serve as combined joint task force headquarters. To assist the joint task force commander this headquarters deploys a joint task force augmentation cell or DIGIFAC. The mission of the DIGIFAC is quickly broaden and deepen the joint expertise of the joint task force commander's primarily single service headquarters staff. In the Pacific Command, our major exercises hone the crisis response operations of the combined joint task forces. These exercises include Tandem Thrust, Cobra Gold, and RIMPAC. Pacific Command has often put its training to use in responding to actual crisis. In every case the response has contributed to successful resolution of the crisis without conflict. The final part of our mission statement is our day-to-day engagement in the theater to enhance security and promote peaceful development (next slide, next slide).

By remaining a regional military leader our intent is that no nation will believe that it stands to gain by military aggression. A secure peace provides a foundation for prosperity and personal freedom to grow. Our goal is to help nations to learn to be regional partners rather than regional adversaries. We also want to expand the foundations for multi-national security arrangements to include all nations who desire to participate. Our ultimate intent is to create conditions where states do not perceive each other as enemies based on historical animosities, but come together to deter any power that would threaten regional peace (next slide). Regional engagement involves encouraging and reassuring allies and security partners and promoting professional relations among all militaries in the Asia Pacific Region. Our engagement activities demonstrate US military intentions, competence,

and many of our capabilities. Our engagement also demonstrates the role of disciplined military subordinate to political authority and allows us to learn the concerns and threat perceptions of other nations. The goal is for all nations to set aside past grievances and to work effectively together for collective regional security. Developing close working relationships leading to trust are ways that we as armed forces can do our part to promote close working relations leading to peace (next slide).

In maintaining the intent of the Commander in Chief, Pacific Command, medical resources throughout the area of responsibility are engaged to maintain the health of the command, primarily through preventive means, since established Department of Defense health care facilities are limited outside of Hawaii. To supplement care throughout the Pacific, travelers rely heavily on host-nation capabilities that meet western standards. This care is coordinated by the TRICARE Pacific lead agency. For forces deployed throughout the theater it is critical that information on the latest health threats are disseminated and understood and that appropriate preventive measures are implemented. PACOM uses various means to insure the dissemination of required information in addition to the multiple travel and country resources available. PACOM publishes information in the form of force health protection policy and guidance in simple language so it's understood by the soldier on the ground. The focus of such documents is to describe the threat and preventive measures to be taken. Implementation of preventive measures rest with the commander of the deploying force or the individual performing the travel. The CINC is focused on bringing countries together to train, share information and

technology, and to develop multinational capability. From the medical perspective, our primary effort is focused on joint operations with the follow on integration of other country medical resources. Joint training allows all the services to share capabilities and information to act as one. Additionally, combined exercises allow US forces to work together with their coalition partners and to learn medical skills and procedures.

Our best example of another country assuming medical support responsibilities is the ongoing operation in East Timor. The CINC wanted to keep the number of US personnel involved to be kept at a very low level. Australia forces assumed responsibility to bring about security in the region and assumed health care support for US forces. Other countries provided health services throughout the country. In January 2000, security responsibilities were passed to the United Nations, but still today moneyed countries and NGOs continue to provide medical support to East Timor. PACOM's medical engagements have opened many country doors where other programs were unsuccessful.

Medical engagements are funded through a multitude of resources. Programs range from educational seminars to providing surgical intervention to civilian mine and unexploited munitions injury casualties. Other engagements provide the knowledge in some telemedicine resources to allow a country to develop its own health system. Infectious diseases are a major concern in the Pacific: malaria, cholera, and dengue, to name just a few of the weekly outbreaks that occur. In conjunction with the PACOM engagement program, the focus is to assist local governments in surveillance, response and preventive measures through training and

technology transfer. This also allows the US to conduct a variety of research projects (next slide).

The majority of our engagement activities involve exercises. Bilateral and regional exercises are a primary means for developing for evaluating operational readiness. Over 80 percent of the Pacific Command's exercise activity involves training forces and staffs in the tasks they need to successfully perform assigned missions. The remainder is for basic skills. Last year Pacific Command conducted over 300 exercises with 37 countries, many being joint, combined exercises with allies throughout the theater (next slide). Along with exercises, PACOM's engagement activities include international conferences to discuss common security issues as well as senior military officer or defense official visits. These official visits build contacts that enable cooperation and the continued discussions. Our engagement activities also include humanitarian assistance projects, which provide training for US troops and assistance for needy neighbors in the region. Finally the Asia Pacific Center for Security study brings together military officers and civilian officials to build relationships through the cooperative study of the Asia Pacific security issues.

I have described the Pacific Command's mission and its major components. Let me conclude with a short discussion of our most important relations within the region (next slide). Our relationship with Japan remains the lynchpin to security in the region. The Japanese host more than 47,000 US personnel forward deployed in the Pacific and contribute about \$5 billion to supporting those forces. Our security relationship with Japan is evolving from a narrow cold war focus on defense against

the Soviet Union. For the future we will be working together in coordinating responses to common security concerns. The defense guidelines are a vital step in that development and will enable us to deepen cooperation in responding to common threats from North Korea. Another important development is the expanding Japanese military relationships with other neighbors, South Korea and Russia (next slide). Another key relationship is the security alliance between the United States and South Korea. I have already described our current combined deterrent capability in Korea in which 38,000 US service members stand guard. South Korea contributes about \$1 billion to their support annually. We are also looking to the future to the security requirements of a reconciled Korean peninsula. President Kim Dae Jong has spoken of the importance of the US forces remaining in Korea, after reconciliation, and he is already reaching out to the states in the region to form a multilateral security framework in the northeast Asia. These initiatives are key elements of the peaceful development of this region (next slide).

The US-Australia alliance remains as strong as any we maintain in the area. We work closely with the Australian armed forces to deal with crisis throughout Southeast Asia. The current situation in East Timor serves as an example of this cooperation, where US unique capability supported the Australian-led multi-national effort. In addition, Australia and the United States operate shoulder to shoulder in peace operations throughout the world, such as in the northern Arabian Gulf. We work hard on inter-operability between our forces (next slide). Also important are PACOM's expanding relationships with the Southeast Asian nations and the Asian regional forum, including our mutual defense treaties with Thailand and the

Philippines. Looking to the future as Asia continues its economic recovery, we see a Southeast Asia developing preventive security initiatives to address Pacific regional concerns. Pacific Command will continue its close bilateral ties with many of these nations while encouraging multilateral activities (next slide).

The island nations of Oceania span a significant portion of the Pacific Command's area of responsibility. We actively engage these nations through security and humanitarian assistance and military exercises with Tonga. The Compacts of free association with the Republic of the Marshall Islands, the Federated States of Micronesia and Palau include US defense obligations. Economic development and environmental protection play key roles in the security equation for these island nations. As we work for a peaceful and secure region, economic interaction among all nations will be the key to future prosperity of the island states (next slide). Our military engagement with India is still not back to pre-1998 levels after India's nuclear testing. With Admiral Blair's visit to India in September this year, both governments are working to reestablish our mil-to-mil relationship through cooperation in peacekeeping, search and rescue, humanitarian assistance, counter terrorism and counter narcotics operations. A durable security structure in Asia is not conceivable without a constructive Indian role (next slide).

Although Russia is traditionally considered a European power, it is also an Asia Pacific nation and desires an active role in the regional security issues. We conduct a series of exercises and exchanges with the Far East military district of Russia and the Russian Federation Pacific Fleet. Additionally, Russian military representatives often attend our seminars and conferences. Russia will eventually



emerge from its current economic problems and can play a strong and constructive role in the Asia Pacific region. Developing our Russian relationships with China, North and South Korea and Japan are all positive signs of their interest for their regional security and multilateral cooperation. The primary area of Russian activity of concern to the Pacific Command is the unconstrained sale of advanced weaponry and technology. These transfers are sowing the seeds of future problems (next slide).

The future course of China will have profound implications for both regional and US security. Taiwan is the primary issue between China and the US. The Taiwan Relationships Act provides that it is the policy of the US to consider any effort to determine the future of Taiwan by other than peaceful means a threat to the peace and security of the western Pacific area and a grave concern to the United States. How the President and Congress will determine any appropriate action by the United States, the Pacific Command's responsibilities are clear. We are ready if directed to respond to any potential crisis, including the use of force against Taiwan by China. Since it is China's policy that it may use force in the resolution of its differences with Taiwan, the Pacific Command and the PLA (or People's Liberation Army) cannot have a completely cooperative relationship. However, there is much for both countries to gain by engagement between our armed forces. We need to understand each other's objectives for the future developments beyond the Taiwan issue. We want to understand Chinese proliferation activities and the PLA's plans for modernizations. The PLA wants to understand in US concepts for theater and national missile defense. We need to know each other better at the leadership and officer levels to avoid misunderstandings and false assumptions. We need to

develop the non-war-fighting relationships common to armed forces, which operate in the same region, search and rescue, air space management, and disaster assistance and cooperation. We are seeing hopeful signs in our military relationships with China. After a long suspension following the accidental Belgrade embassy bombing, we have recently resumed our engagement program and look forward to the reestablishment of vital contacts with the Chinese military. Our goal is a relationship of mutual understanding, mutual respect and clarity with the PLA (next slide).

Let me conclude with a few summary points: Pacific Command is here to stay in the Asia Pacific region with ready, powerful and forward deployed forces. Operating with allies and partners in the region we are deterring aggression, we respond to crisis and we engage in a wide range of day to day activities throughout the region. For the future we are developing new dominant war fighting capabilities through joint experimentation. We are working to build our many strong bilateral relationships to form multilateral security structures in the region, building a foundation for peaceful development to the entire region's benefit. That concludes the briefing, subject to your questions.

**Dr. LaForce:** Thank you. I particularly want to make the observation that the size and the complexity of the Pacific Command as you presented is really daunting. And the second point being, there has been a disease eradicated in the Western Pacific because last year the Western Pacific was certified as free of poliomyelitis under a multi-national effort that included China, such that the Western Pacific area is now officially poliomyelitis free. That does not extend, obviously to

India and Bangladesh where there still is active polio transmission, but at least the Western Pacific that has been accomplished. Questions about the presentations? Yes.

**Dr. Ostroff:** Have we had any role in responding to the earthquake in India?

**COL Navin:** Sir, at this point in time what the Pacific Command has done, the Pacific Command itself, has sent a five-man assessment team departed Hawaii last Tuesday and they are currently in India. You've read in the papers where we have had a military air lift in bringing supplies, plastic sheeting, sleeping bags, blankets, water trailers, fork lifts, other heavy equipment. To date that's the level of response that we have given India as well as money from the United States.

**RADM Wright:** You may or may not be aware that the way the military responds to a natural disaster like this is that a request has to come from the ambassador from the ambassador to the state department, they determine what is an appropriate response and what role if any, the DOD should have. Then the request comes over to the DOD then back down to the command. In the case of the Indian disaster, we were already looking at what we could do while we were waiting for that process to occur. As it turned out the response from other nations and agencies led to some delay in the India's deciding even to ask for any assistance and was such that by the time the Pacific Command was engaged, allowed to engage actually, the need had pretty well been taken care of by others. Specifically, the medical supplies were flown in. Actually the Indian medical infrastructure stood up pretty well, didn't lose a lot of hospitals, supplies. Other nations NGO's were sending in portable hospitals. We were asked not to send in a portable medical facility. They had the

supplies already had as well. Looking more at providing equipment to help with containment, but some money that was initially secured for medical supplies.

**Dr. Patrick:** You mentioned a couple numbers 47,000 in Japan and 338,000 in South Korea. What's the total population or total there?

**RADM Wright:** If you look at the whole thing, it's reported out that we have the forward deployed and that includes the people we have in Japan, Korea, the Southern fleet afloat. That comes out with the marines stationed in Okinawa that comes out closer to 100,000. If you look at those who are forward based and those who are assigned forces that are on the west coast of the United States, it comes out to about 300,000.

**Dr. Patrick:** And the trend? Has it expanded, contracted?

**RADM Wright:** It has contracted somewhat but it's pretty stable at this point. Certainly the forward deployed force which is the most sensitive part of the nation's outcrop is about 100,000. There's no intent to control that now.

**Dr. Patrick:** And what about dependents? What is the overall size there?

**MG Adams:** When you come up to the hospital we'll give it to you in the TRICARE Pacific briefing we'll give it to you by the regions, because we separate it into active duty and family members who are assigned by their military training facilities and those that are in remote areas where we have to use host nations. We'll give you all those numbers.

**Dr. LaForce:** John.

**Dr. Herbold:** For those forces that are forward-based or what's known as CONUS based, who's responsible for the daily health maintenance and health surveillance, does that fall...?

**RADM Wright:** What we call forward based is Hawaii and Alaska. And then there is the CONUS based which is the west coast and everywhere else.

**Dr Herbold:** So Washington State would be CONUS, and Alaska and Hawaii would be forward based, and forward deployed is...

**RADM Wright:** All the forward-based, as well as the CONUS -based fall under the TRICARE, under the TRICARE lead agency for that, which is General Adams has Hawaii and Alaska as well as Japan and Korea.

**MG Adams:** Then the CONUS surgeons are very much interested in the healthcare from the active duty perspective, identifying with those issues.

**COL Navin:** If there are no further questions, I'll be followed by LTC Astraib from the US Army Pacific Command.

**MG Adams:** One of my other jobs is United States Army Pacific surgeon, but since I do have four jobs, LTC Astraib is the executive officer in the surgeon's office, so he is indeed in touch with the day-to-day operations. It's a trend in the downsizing military.

{Transcription: Tape 2}

## **USARPAC BRIEF**

**LTC Astraib:** I am the Deputy Chief of Staff of Medicine at US Army Forces Pacific. And I'm glad that General Adams pointed out that she is the USAPAC surgeon among many of the roles that she plays. She is the USAPAC

surgeon, Commander at Tripler, Commander of Pacific Region Medical Command, the 18<sup>th</sup> Medical Command, surgeon in times of Contingency Operations in Korea, and TRICARE lead agent, so she is a bit busy which is why she has someone like me to assist her in running her office over here. I've said who I am already (next slide please). These are the items I intend to cover this morning and if I speak with a slight Southern drawl or speak too quickly, please let me know to slow down a little bit. I was born and raised in Pittsburgh, spent most of my career in the southern states or Islamic countries, so some Arabic may climb in there somewhere. The areas I intend to highlight specifically are joint operations and how the Army fits in to PACOM's plan here in the Pacific, as well as our engagement programs and how we achieve readiness (next slide, please). You've seen this before, at least in another form with COL Navin. The numbers may be just a shade different. Seven of the world's ten largest armies, that difference, maybe we can compare numbers later, we do have seven out here, but this is a rather vast region. You're also talking about 150 million square miles, you're speaking of the area just in terms of ease of understanding, from the Arctic to Antarctica and from Hawaii and Alaska as far west as Madagascar and the eastern coast of Africa. So it is a very large area and does contain 60 percent of the world's population, which is rather surprising to me (next slide please). This is the way we fit in. We in the Army actually have two masters that we have to serve. First we do pure Army operations as a result of the green part of the screen, the right hand side with the chief of staff of army giving direction and looking back up through the joint chiefs of staff, getting all of our guidance from the national chain of authority, president, vice president, secretary of state, secretary of

defense, and then coming down to US Army Pacific. It's noted here, 8<sup>th</sup> Army at the very bottom of the screen with a line drawn also to the chief of staff of the Army is an equal with the US Army forces of the Pacific. We do not command, there is no command relationship between the two of us. Thank you. There is no command relationship between the two of us here. We in the US Army Pacific do not control any forces in Korea, unlike PACOM, which does. Then on the purple side of the slide here signifying joint staff, we also gain direction from, from CINCPAC. And that's where the majority of our operations lie (next slide please).

How do we fit in out here? This is a listing in the center section here how many folks are actually assigned to the different services in the Pacific and then what percentage of our total forces that is, for example 37,000 Army folks assigned out here, and that's only 3 percent of the Army's total force. However you come down here, that's 3 percent of the force but typically 5 percent of operations are run out here. So we are constantly busy, as an example for a point in time, on the 29<sup>th</sup> of January we had about 1200 soldiers deployed in 22 countries, so we tend to keep a bit busy that way, in fact when I talk about engagement, sometimes the Army engagements, very briefly because engagements alone there's a one hour meeting every Tuesday morning from 10 to 11 when we brief our deputy chief of staff for operations, just where we are, what we're doing, and whether or not we are safe in being there (next slide please). These are the missions that we gain, from PACOM on the left and the Army on the right, the big Army, and then (next slide please) and how our mission fits into that and what we have to do in order to achieve the balance between the two masters that we have. Security operations, engagements, what are

you in, engagements to war fighting. It's no longer the type of service where you can specialize in just one very narrow area and expect the other million and a half people to have their own specialized narrow area. We run the gamut now of everything. We participate in all operations, which is why such things as rules of engagement, understanding what you have to do before you go to a place, understanding what the overall mission is, is the mission presence, or is the mission a little bit different, is there something we're supposed to have as a product when we depart? So it's becoming more and more confusing and more and more difficult in order to achieve the balance for all the operations in which we participate (next slide please). An Army guy needs to have my finger on the trigger so there will be a variety of slides here, if you'll be so kind as to hit that about eight or nine times, and that'll fill up that box. Ok, that's the last one, thank you.

Command and control forces. These are the mission essential tasks, those things our commander has decided are the most important things for his command in the Army, so for here in the Pacific command and control the forces as an Army service component command, that means we are the Army agent for Pacific Command, that providing deployed and trained forces, making sure that they are ready to go, conducting theater engagement activities in the variety countries that you see and as an example this week we have a train out, four individuals going in a blast resuscitation and victim assistance program mission to Cambodia next week. They'll be working with the surgical intervention for the land mine victims there. At the southern point of the land mine field, the largest one in Cambodia during this particular season they average a new blast patient about every 16 hours, so we're



sending surgical assistance for this time period. Providing support with military support civil authorities, such things as when there was an anthrax supposed envelope that was mailed to what was supposed to have been and had been in the past a birth control clinic downtown in Honolulu. Additionally Tripler was called by federal authorities to assist, by the local police to assist then NEPMU 6 was called out to assist in the identification of the toxin, to determine whether or not it really was anthrax or not. So we get involved in those type of activities, domestically here as well. Executing RSOI. We are like any other organization has a variety of acronyms. That stands for Reception Staging Onward Movement and Integration. That is the mission that we have in order to move forces across the Pacific, and it is also by example what GEN Griffin is doing here with the 2<sup>nd</sup> Medical Brigade up at the exercise. He has an RSOI mission to receive the folks when they come, to stage them properly and get them prepared for their mission, to move them to where they finally have to be, and then to integrate them with the other services and the other people who are flying out there for the event, because this is a joint exercise.

Sustained Theater Forces, how we keep up with the logistics of everything, how do we keep fuel out there, food, information is very key, medication. Providing Force Protection, now this very key to you all. Force Protection is not simply putting up the concrete barriers around buildings and making sure that people don't get hurt by someone who has a handgun, this is also finding out if such people as COL Washington who we use an awful lot out here and I really respect and have a good feeling about working with because he's very knowledgeable, for preventive medicine out here, because we have prepare our forces before they go in, make sure

they understand what the medical threats are going to be when they arrive, to make sure they have the proper prophylaxis and they understand what treatment is while they're there as well as identifying symptoms when they return and the post treatment that they may have to undergo. So Force Protection is a very key thing for you all. Whenever you hear that you need to keep that in mind for a preventive medicine aspect. And then Gaining and Maintaining Information Superiority. I turned on the computer for the first time in 1990 when I was asked to be the cartographer for US Army forces in the ground component for Desert Shield/Desert Storm, and so I made maps on the computers for where all the medical assets were. You all have worked with computers I'm sure, you bring laptops, you have all kinds of electronic stuff with you. How many hits do you think we have just on the Army Pacific terminal in the course of the week, people that are trying to access the system that are not authorized to do so? One week, wild guess. Pick a number. 5000? I'll save you time, 800,000 on average. Many of them are routed through Canada, does that mean that Canada is trying to access our systems? No, that means that Canada has the easiest routers to get to, so many of those are coming from the Soviet Union and from China, through Canada and into our systems, so just to give you an example of another form of protection, information protection.

Chemical Demilitarization, we have Atoll Johnston Island down here, you may have heard about it, in a variety of venues, not the least of which may have been the Cobra Event. I was so glad that book was written. As soon as President Clinton read that book, he gave \$10 million additional to biological research, so that was great, but Johnston Atoll is going through its demilitarization now. It's been in

existence since about 1973 I believe. It moved from the Department of Energy to the Defense special weapons agency for control in 1993. They already had their last rounds ceremony about a month ago. They are going to be decertified due to mission completion on or about the first of April and then be demilitarized ultimately about August of this year. So that is a success story. That is a destruction of the chemical weapons that have been used for a variety of operations, including Agent Orange out of Viet Nam, so that is a good news story (next slide please). These are the next three areas that I'm going to speak very briefly about (next slide please). The ways in which we provide forces to a variety of venues which you see up here, whether it be in the snow or airborne operations out of Alaska into a more tropical environment. Knowledge based Networks is very new, at least for us anyway, working at this headquarters, as well as working with criteria feels like it's always been always but now we're working with the sharing of information across the network so that internally if I write a staff paper on Cambodia then the Ops people or the info people can access that without having to call me or get a copy of what I've written already (next slide please).

This in itself is about a 15 minute briefing; I'm going to make it about 30 seconds or less. This just defines the way in which we engage countries working from the bottom to the top here. As an example, Cambodia was shut down to operations as far as we were concerned back in about 1997, that was the last time that we had an operation in there for variety of reasons that such relations deteriorate. In this particular case, this was in part because there was a hesitancy on the side of the Cambodians to prosecute the former Khmer Rouge folks, and therefore we

wanted to try to assist them in seeing their way clear to prosecute these people, so we stopped a lot of the things that were going on in their country to their benefit. That has just started up again with this past year and as an example we describe our mission going in, but ordinarily the flow that follows is you have the senior officer visits with the way that it starts out you may see this with Indonesia as we get more and more toward the end of starting to engage them again.

Moving into Staff Information Exchanges, we're seeing subject matter expert exchanges where we go there with some people and teach them a for a bit and they come here and teach us some stuff. Discussions and Conferences. I'll talk about conferences in a minute with the Asia Pacific Military Massing Conference. Key here, engineers and medical. Medical and engineers are the most non-threatening military folks that you can stick someplace into an area that you are trying to re-engage once again, whether the engineers are building bridges that have been washed out or building schools or hospitals as we have now in places like Nepal, or if the medical folks are in there doing other assistance in the way we have done in the past in Mongolia, Nepal, Burma, Thailand, Cambodia, Laos, Viet Nam, or we're going in there to teach them how to perform certain functions, we are ordinarily the first folks in along with the engineers. In fact on an average day about 38 percent of the operations are medical or have a medical aspect to them, another 22 or so percent are engineer, so a good bit of what we do falls into those categories, and that as we get a little bit closer with them, individual training, unit training, bilateral exercises, such as Cobra Gold, ??? and some of the other events that take place out here in the Pacific (next slide please).

Busy slide, drive you crazy. I know that the end of the morning one of you is going to die and they're going to put on your certificate, death by slide. I'm very sorry. I know it's going to happen. Some of the activities that take place out here, Pacific Army's Management Seminar is to the chiefs of staff of the armies out here just as the Asia Pacific Military Medicine Conference that is hosted by GEN Adams and co-hosted by another country that is selected a few years out each year. Last year it was in Singapore. There were about 400 delegates, I think 105 or so were Singaporeans, so that kind of throws it off a bit. On average about 300 delegates from the countries in the AOR. Typically of the 43 countries that we have out here, 28 to 33 participate, so it is a good way to engage, it's a good way to informally associate, meet these individuals, make friends, understand the way their country works and their culture works. And this year the conference is going to be in Auckland, New Zealand. The 6<sup>th</sup> through the 11<sup>th</sup> of May. But these are the other types of events that take place, and if anyone would like these slides emailed to them, just let me know I can do that so you can have this for your very own (next slide please). These are the exercises in which we engage. And again we have six charts back in my office that we use to brief exercises once a week, so (next slide please). Assistance to Civil Authorities. In working with such things as the hurricane that took place here just a short time ago, chemical agent identification such as were found in Alaska and Guam had to be identified, categorized and disposed of properly. Those are some of the types of things in which we assist (next slide please).

Ok, where are we going to go from here? It's a very dynamic setting out here. COL Navin pointed out very clearly I believe that the area changes constantly and it is huge, and therefore we have a lot of things to consider while we're out here (next slide please). Looking at Kuala Lumpur, you're looking at Malaysian port, Hong Kong financial district, an Army nurse working in one of the countries here in the AOR, very, very dynamic region, very diverse (next slide please). These are the things that feed into how we respond and the things that impact upon us in the way that we have to act here in the AOR, Area of Responsibility. Diplomatic Influences. Before we go into a country, we have to speak with the embassy, speak with the country king, speak with the defense attaché, find out exactly what the country needs, find out what they want, find out if what they want is different from what they need. I was told in Saudi Arabia, never tell me what I want, no I'm sorry, never ask me what I want. Tell me what I need and I'll tell you whether or not you're right. Ok, so it depends on the perspective from the culture about how you approach these things. The military information that comes in as well, technological gaps that they have. If we're going to have a bilateral exercise with someone we want to make sure that our radios are compatible so that we can talk with them and make sure we don't overrun each other's lines. Economic and Social. What are the types of things that they are looking for? Are they looking for money? As of right now, as the examples brought up about India, they are in great need of cash at the moment, but also assistance with heavy equipment, concrete cutters and those types of things. And all these things impact on how we operate within the area (next slide please). And lastly, spectrum of operations. This runs the full gamut as I mentioned earlier,

going from engagements over here and disaster relief all the way through something I hope that I never get a chance to see, those types of things we rehearsed for in high school when you jumped under your desk and covered your head. We've engaged in a good variety of these, counter terrorism, counter drug now is becoming more and more of an issue. Not only do we assist in Honduras, but Thailand is becoming an increasing area of an interest as a result of drugs being brought in across the border from Burma, so these are the types of things that we as an Army are viewing and may be asked to assist with. Barring any questions, that concludes my briefing (last slide please). And this is what we're looking for, things we are doing today, trying to set the example, looking forward to tomorrow. Are there any questions? Thank you very much.

**Dr. LaForce:** We're going to change the schedule around a little bit and take the break now while MAJ Trent sets up the presentation and also before we break, Ben wants to take up a few administrative issues.

#### **ADMINISTRATIVE REMARKS**

**COL Withers:** The sign up sheets that were up last night for the island tour, that's this afternoon, and for the remembrance barge tour, board members, service officers, anyone is welcome to sign up. You may have to make some hard decisions between COL Diniega and I, but anybody who's interested, please go back and sign up now. Second, I'll pass around a list after the break for dinner tonight. That's all I have.

*BREAK*

**COL Withers:** Ok, a few announcements here. Lunch will be in a separate area. We have tickets for all attending board members, service representatives and off-island speakers. If we have some left over after that, we'll distribute them. Lunch is available for a regular charge in the building (Mulligan Room) here for those who don't have tickets. We also, one of our board members Dr. Berg has had surgery recently, so we have a card coming around. COL Diniega will start it, so board members and service reps if you'd like to write a few notes to Dr. Berg, feel free, and then the dinner list is coming around from Commander Ludwig. Thank you.

Ok, our next speaker. MAJ Trent. MAJ Trent comes from Air Combat Command surgeon's office. Air Combat Command is the one of the major commands in the Air Force at Langley Air Force Base. And she's going to talk on GEMS, and there's the title.

### **GLOBAL EXPEDITIONARY MEDICAL SYSTEM**

**MAJ Trent:** Good morning, sirs, ma'am. It's a pleasure to be here. It was a little short notice, but I'm always happy and able to talk about GEMS. As he said the title up there is Global Expeditionary Medical System. And I'm going to tell you a brief overview of what the system is, and talk about it, and then I'm going to go into a portion of it that's call the Theater Epidemiology Module to talk about how the system works (next slide please). The idea is that this is for an expeditionary environment. We're looking at putting in the far forward, and as a result of that it's very light, it's very lean. It fits on a laptop. We're actually putting it onto a palm top. It can be in a stand-alone system or it can be LAN. The idea is to get very light.



It's built on an Access system. It's built on Microsoft Access and we did this intentionally. We had put a system out in the theater in southwest Asia that was built on a larger server but we had trouble getting that server serviced in a very far forward environment, and so we went back to an Access-type database to make it light and lean, because there are folks there that are deployed that can troubleshoot most Access database.

These are the components that we decided that we wanted out of the system when we to go put it in place (next slide please). This is just talking a little bit about our target use. We're primarily aimed again at the pointy end of the spear, going up to an EMEDS +10. Now this is meant to be an interim solution until TMIP and CHCSII Theater come on line, but as of right now both of those systems are designed to go up to a second echelon EMEDS + 25 type facility. So we still have a little bit of an information gap for the things that are very far forward, but we are working closely with both of those agencies to make sure that we're not overlapping on our objectives, and they're well aware of what we're doing. We worked with them on our data fields (next slide please). GEMS is actually a system of modules, and what I have up here listed are three of them. The Patient Encounter Module is the portion that the provider or the technician, whoever is processing the patient, sees, and I'll give you a quick overview of that. The Theater Epidemiology Module then takes the data that is collected through the Patient Encounter Module, aggregates that data, and gives you a tool to look at epidemiologically. The RAPID, the Ruggedized Advanced Pathogen Identification Device which is very similar to the Army's smart cycler, is just a PCR diagnostic device that we have paired with the

system to give us additional pathogen identification capability. There's also a fourth module that's under development right now, and it's a Theater Occupational Module that'll round out the capability of the system (next slide).

This is just a screen shot of one of the older versions of the Patient Encounter Module and what I'd have you look at here is that almost everything is driven by drop down menus and these have been developed over course of time. We have filtered the systems to number of med flags in Africa, through a lot of European deployments, and we have received a lot of user feedback on how they would like to see things, the kind of things that should be in these pick lists, how they would like the system to flow, so we work very closely with the users because as most of you know, in order to get good data into a system, the user's got to want to use the data collection tool, and so the point of the PEM is not only to collect data, but we try to do it in such a fashion that's very user friendly and it gives the providers the things they need. It prints out a number of forms, if they ever like it to print 600, it prints that out for them. And there's a number, we're working with Air Vac in moving data with them, they're printing out their forms and a variety of reports. So we have tried to put something together that the providers want to use so that we collect good data. We do get most of the demographics from a variety of sources. We try to get from MIPS because we know that's a good data source. I believe the next slide, well this is just a drop down, there's another slide on the data sources. If you will note here, everything is a check box fashion. There is a very good reason for that. What we are doing by having providers select from a pick list and check, is these are collected as discreet data elements. Instead of having a text field where they can

type in fever, feverish, whatever variation they want to put in, by having them select from a pick list, it puts discreet words into that data field, and that is what we sort on when we get to the Theater Epidemiology Module. We also have a physical exam checklist, diagnostic checklist and one other checklist, which I can't recall at the moment. So the provider just goes down and checks. Now these look like long lists, and what we're developing for the providers right now is templates, so if somebody comes in with an ankle sprain, you can pick from a musculoskeletal template so you don't have to sort through all of the different symptoms or diagnoses for that given complaint (next slide).

This is the Crisis/ER Mode. This is a compromise that we came up with. When we initially started working with the providers, their complaint was that it took too long to put the stuff in, and they did not any required fields in the data, which doesn't work very well epidemiologically, because you know it kind of became garbage in, garbage out. So what we did is we have a compromise. Day to day operations we fill in automatically as much of the demographic information as we can, whether it is from a pick card, a smart card, from a purse code table download, an immunization system download, whatever source we can get for getting that in there, and then there are a few required fields that the provider cannot get out of the system without filling them in. For instance, one we have a lot of problems with is they forget to indicate whether it's an initial visit. Doesn't default to anything, it says you must indicate what kind of visit it is. But that is critical if you're looking at incidence versus prevalence in your data, and so the compromise we came up with for mass casualty, when they really do not have time to sit down and put down all

this information, is we have a crisis mode. Everything is on one page and absolutely nothing is limited. But in the background, this data that goes in, in a crisis mode screen is flagged, so that we can pull out that data that's incomplete, so we can have a good view of our data, for our day-to-day operations. So this was a bit of a compromise, and it seems to be working very well (next slide please). I must have taken out the data source slide. But we do pull it from a number of sources.

This is the Theater Epi Module and this is the part that I'm the most familiar with and what you see up here projected is something that we call a watch board, and these are set up for specific theaters, with specific queries, and when I pull up the program to demonstrate it, I'll talk about each of those areas individually, but it is a component of the entire system (next slide please). And this is just a picture of the RAPID device. It's in place at Oton and Koson in Korea and then we deploy a biologic augmentation team with the system, and I know that NEPMUs have them as well. It's just an augmentation, because the more information you have in the field, that much farther ahead of the curve (next slide please). This is just a sample data flow. I had a lot of questions over the last couple of weeks at Pacific Warrior what happens to the data. It is collected at a variety of levels. We have a locally deployed database. Now that may be on one laptop if you only have one or two providers, or it may be a LAN system on a central server, depending on what your setup is. The theater CCS is command corps system. Right now it's a separate line. That's the occupational system that we're working on. And then it goes up to a JTF theater database. And then it flows on back. For us it goes back to Brooks, and from Brooks it goes to CHPPM. And it's collected. It's smaller and smaller data sets

based on what they need at that particular level. We are working on a coalition version that's integrated with NATO because of the huge demand in many of our operations and that will go into the same module, the way of pulling in the data from the NATO system (next slide please).

We are working on right now and it just went operational this week a Web-enabled Theater Epidemiology Module. So the data goes, flows into Brooks, is imported into the system, and looks exactly like the TEM I'm going to show you later today and it just gives those with a need to know. It's password protected, secure website, visibility into what's going into their theater operations (next slide please). This is just the web page. We do post the GEMS product on a web page right now. What's up there is a little bit outdated, because we've been fine-tuning the system as we've gone through the Pacific Warrior exercise, by anticipating the next couple of weeks we'll have an updated version up there. We also have an interactive trainer. A lot of questions come up as how are you going to train these folks. Folks are trained on the system at our school of aerospace medicine when they go to do their EMEDS training, because the system is in place in all our EMEDS units (next slide please). And this is the team. The interesting thing that I'd like to point out is that it's a multi-disciplinary team. Dr. Turner is a physician, a flight surgeon with a lot of deployment experience. COL Humphrey is a lab officer with a lot of systems experience. And I'm a public health officer with a lot of epidemiology surveillance experience. And so we've tried to round this out and not have a purely provider bent or a purely surveillance bent to make an integrated product (next slide please). That's the end of the slides. Any questions on the

overall concept of GEMS? And then I'm going to demonstrate the TEM to you.

I've got the PEM I can demonstrate, but given the audience I thought you'd like the Epi module better.

**COL Withers:** Rosy.

**Dr. Sokas:** Do the people that do the inputting have access to, can they use that information locally, is there a part of it that gives them if they want to graph out what they have just seen in the last week or two, is that a possibility?

**MAJ Trent:** You can load the TEM, which is a graphing capability on any computer in the system. Eventually they'll be in basically the same program, so they get that visibility. Most of the providers will wait to see what that visibility is, but they can see that.

**Dr. Sokas:** So if they want to play with it they can, but if not, how long does it take to get that information back from CHPPM?

**MAJ Trent:** Depending on the system that's set up. Right now you have to export from the PEM. Actually we go out and grab it from the Patient Encounter Module database into a separate table to do the Theater Epi Module, because what we found is it slows down the system. It slows down the system when they do the queries and providers get mad if the system slows down. And it will be set up so it goes out and grabs that on a periodic basis whether it's every 15 minutes or that type of thing. It should run behind the scenes. Right now you have to push a button to refresh the data.

**Dr. Patrick:** So this is not necessarily meant to record in real time and is not designed to support tele-medicine consultation?

**MAJ Trent:** Any data that is collected in the Patient Encounter Module is real time, because it's all going off in the same database.

**Dr. Patrick:** But is it available somewhere else in real time and then sorted and then goes back?

**MAJ Trent:** No it's not. We have played with that in the desert and what we've found is that the more advanced you get on that type of system, the more problems you have system wise, and again this is meant to be a far forward expeditionary setting and our assumption is, especially on initial deployment your com is going to be very minimal and you're not going to have access to a web and you're not going to have a server that can replicate on a regular basis, which is what I think you're talking about. Our assumption is that at least they're probably going to have the capability to download, export data onto a disk and walk over to the com shack and email it from the com shack. Now you could set it up that way but we would have problems with an in-theater replication supporting a database, trying to do that effort. Right now it's at a location, geographically located. It's as often as you send them the data.

**Dr. Ostroff:** Actually two questions. One is I noticed that there is an arrow between GEMS and CHCS and I'm wondering how successful you can be with patient encounter information, medications, etc. that can be exported into CHCS.

**MAJ Trent:** It can be exported into CHCSII. We elected not go to backwards and just work as CHCSII comes on line. It can be exported into that, but at this point because of the nature of the systems, we cannot readily pull that out of CHCSII.

**MG Adams:** We don't have a functioning CHCSII unit, so, that is a significant hang-up.

**Dr. Ostroff:** And the second question I have and this one is sort of dabbling around in the area of diagnostics as well is if these are assays which assumably are not licensed assays and we get into difficulties when we're using unlicensed assays for patient diagnostic purposes.

**MAJ Trent:** You'll notice I said pathogen identification and not diagnostics for a reason. It is a piece of the puzzle, but the provider must make a call. They know it's not FDA licensed and they have to use the information on the symptomatology, the epidemiology and everything else that goes into it. They can't make a diagnosis on a PCR device. It's a pathogen identification device.

**Dr. LaForce:** Major Trent, I have a lot of gray hair, and a lot of the gray hair has come from information systems (MAJ Trent: Agreed, sir.) that have been developed and end up in a graveyard. And so I am somewhat of a skeptic. The system it just sounds so great. Does the corpsman use it? And secondly, I assume this has all been field tested in deployments.

**MAJ Trent:** As we speak, sir.

**Dr. LaForce:** Aha, it's going on.

**MAJ Trent:** Yeah, right now we're playing it at Pacific Warrior.

**Dr. LaForce:** So I have a chance at being grayer.

**MAJ Trent:** Yeah, actually we were in Millenium Challenge 00, we were in JFX 00, JFX 99, and we've been on a number of small deployments, specifically because of the problems on any large deployment, so we have done some field-



testing on it. We're about to field it this summer to southwest Asia. It's in place at Pensolton Air Base and the Escon Village, and we've had no problems with it over there, but yeah, it's an interim solution, but then they're all interim solutions.

**Dr. LaForce:** Interim solutions, undergoing change. I congratulate, this is still something that just bedevils everybody and sooner or later it's going to get resolved and I would just continue to encourage your courage.

**MAJ Trent:** The biggest obstacle we find is provider resistance to using the system. They want to write down their 600 and then they hand it to the technician who then types it in. It's a duplication of effort, so it's very much an education. And like I said, we have to sell it to the provider by giving them, making their job easier with the tool that we're using to capture data.

**Dr. LaForce:** Yes, other questions, yes.

**Dr. Campbell:** Do you have a means of patient encounter to transfer information as it goes through the Medi-Vac system?

**MAJ Trent:** Absolutely. I smile because that was one of the things that we were testing Pacific Warrior. There is a system that we were testing that's called IFGR, Information for Global Reach, which uses any available technology on the plane to transfer information, and what we did this time is we, you can export a single patient file, you can match it up with a digital X-Ray or whatever else you need to transmit, and then you can attach those to an email and forward them down. So if you put a patient on board a plane with the information in the GEMS and we tried moving it on a pick card, on a floppy or via email, if the patient has complications in the air, those are documented in the Patient Encounter Module, then

that follows export and sent on to the gaining provider, or if they need consultation they can also send it to the provider and get consultation back, and so that's one of the things we're really focusing on this weekend.

**Dr. Campbell:** What about lower echelons? Can they get any information transferred at all?

**MAJ Trent:** Our assumption, yeah, we can put into the hands of the independent duty medical technician or a field medic if they have the electronic capability to capture it, and again transfer by email.

**Dr. Campbell:** As you know one of the big frustrations in Medi-Vac is that we have no information on this patient, it just doesn't show up and they've been through many health care providers, by the time we see them, certainly at the aircraft level.

**MAJ Trent:** The way the PEM works is for any air, once a patient is flagged as an air-vac patient, it becomes a continuous record with whatever note you put in and a signature block time date for when that note was put in, so it changes with whoever is putting it in, but you've got an ongoing record.

**RADM Wright:** You've got to understand this is prototype, experimental, which is what the Air Force is using Pacific Warrior here to test these things out. If we had a real operation tomorrow, we would not have this technology for the forces to use.

**Dr. Campbell:** Well, I thought it's just a wonderful idea. Having been involved in Medi-Vac a fair amount, that is always a source of problems and I can

see that this is very adaptable for that sort of situation, particularly if you can get as you said on a palm pilot, that would be good.

**MAJ Trent:** That's what we're aiming for. Yes, ma'am.

**CDR Ludwig:** Will anyone, will any other branch be using it besides Air Force, and if not how will it interface with the other systems so the CINC can get a sense of what's going on in the entire thing?

**MAJ Trent:** We started playing with the Navy. We played with them in the Millennium Challenge along side SAMS, in working with them. It's kind of a question above my pay grade as to whether every other service is going to do that, but TMIP when it comes on line should be a joint solution and they're watching what we're doing, but I cannot tell another service to use the system. Right now the only folks we can really tell to use it are folks within Air Combat Command.

**Dr. LaForce:** Last question. Ben.

**COL Diniega:** Back in May the Board, in May or September, received a briefing on a surveillance system by NICE, the Essence System. How does this compare with the ESSENCE system?

**MAJ Trent:** It's very similar, and if I've got time to demonstrate the TEM I'll talk about that.

**COL Diniega:** Ok. Just a comment to the board members. I've been involved in several meetings now in BW surveillance, syndromic surveillance, and one of the big issues is that there are a lot of good initiatives going out in the community to look at this, and the big question is that with so many systems how do

you decide which is the best one and how do you select the right one? Nobody really figured out how to do that.

**Dr. LaForce:** I would suspect that's going to be a tincture of time and that things will sort themselves out and it seems a bit confusing now, but.

**MAJ Trent:** In a lot of the discussions we've had, is that if the different collection systems are relational but the tools to collect the exact same data are different as you aggregate that, as long as the symptom list in one system is the symptom list in the other then we should be able to aggregate it, and that's kind of the assumption we're working on right now, but whether that will happen or we'll go to one system I don't quite know.

**Dr. LaForce:** MAJ Trent, I'm going to plead that we do something a little bit different about the demonstration and in that I want to make sure that the preventive medicine officers really have enough time to present before noontime, and I was going to ask if it would be possible for you to stay on through the lunch hour, through noontime, and then if we could set a bit of time aside to actually for those individuals who want to go through the demonstration as I would if we could have someone here to run it then, would that be possible?

**MAJ Trent:** I already have a lunch date, ticket. Yeah, that would be quite possible.

**Dr. LaForce:** I was going to offer to spring for your lunch.

**MAJ Trent:** Yeah, I would be more than happy to do that. I did not stress a whole lot on the TEM, because I thought I was going to talk about it. There's a

couple key points that I might want to make about the TEM to the entire audience, if I can do that real quick.

**Dr. LaForce:** How long is that going to take?

**MAJ Trent:** About two minutes.

**Dr. LaForce:** Excuse me?

**MAJ Trent:** About two minutes.

**Dr. LaForce:** Two minutes? All right. You've got two minutes.

**MAJ Trent:** Can you back me up to the TEM? Never mind, right there it is.

The point that I want to make is that these are, it's customized to an AOR and these, the criteria that are set up are set up by the preventive medicine or the public health function based on the medical threat in the area and the population under surveillance. The lower left hand corner are what we call queries, and addressing back to COL Diniega's question, if you look up there some of those are prefaced by a DMBI. The DMBI categories are coming out of diagnosis in the ICD9 categories, and translated behind the scene by disease, non-battle injury categories. However you'll also see if their symptom SX. Those are syndromic surveillances, and those queries are set up to pick up on those cases that meet certain criteria, for instance, for influenza they have to meet two of five—fever and one of the other sore throat, cough, headache symptoms for influenza, plus they have to have a fever of 100.5 or higher. That's the WHI CDC definition of influenza. And so these are customized to each location, whether it be very small, for a hospital or for a theater, and they are customized at each level, as they're aggregated. The color changes are alarms. We talked a little bit about warning capability. Right now they don't email anybody, but

the plan is if you go yellow, you go red, you get an email to whoever you designate, hospital commander and your preventive functions. And that's the primary point I want to make on that, is how the queries work and we can look at different criteria. We're not forced to use a diagnosis, which in the field often is not a very good one, but we can go with syndromic. Two minutes or less?

**Dr. LaForce:** Thank you. Could you then, with the board's permission, at 1300, would you be able to come back somewhere around 1300 hours and then go through a demonstration if you would at that time, which would allow plenty of time for questions?

**MAJ Trent:** Sure.

**Dr. LaForce:** That would be ok? All right 1300 it is. Thank you very much, MAJ Trent. Next speaker is CAPT Beecham from the Naval Environmental and Preventive Medicine unit here in Pearl Harbor.

#### **NEPMU BRIEF**

**CAPT Beecham:** It's a pleasure to be asked to tell you about the Navy Preventive Medicine Unit 6. I'm Jim Beecham. My training is infectious disease, 19 years in the Navy. Prior to that I was a young lieutenant with the CDC like some of you around this table, and I was an EIS officer in 1976, so we'll see if we have the presentation. Can you hear me ok? Ok. Go ahead and start the presentation. I'll give you about a 30 second acronym-free presentation here, if Dr. Yund will crank up the volume as loud as he can. Go ahead. (Hawaiian music). That's our building. We're a very small unit, only 40 of us. (Radio announcement). I think that's it. Our mission, the Navy Environmental and Preventive Medicine Unit has a proud history

of about 50 years, a little over 50 years in the Pacific. Our mission from this mission statement here is to provide, as you can see, preventive medicine assistance, environmental and occupational health, deployment health surveillance, and only recently CBRE, chemical, biological, radiologic and environmental surveillance in the, in this area of responsibility, to all the fleet, Marine, and operational forces in the whole Pacific area (next slide). And actually I think rather than running down this laundry list of things that we do, I'm just going to try to rapidly show you some of the pictures and you might get just an idea of what a small, thank you, a small public health unit does in the Pacific, so just go to the next slide and actually just flip forward here, go ahead.

Let me just stop here and say that our chain of command begins at the chief of the Naval operations down through the Navy Bureau of Medicine and Surgery and our headquarters is actually the Navy Environmental Health Center and in Norfolk, Virginia. And under the NEHC, as we call it, the Navy Environmental Health Center, there are four EPMUs worldwide, four Navy preventive medicine units, one in Norfolk, San Diego, Pearl Harbor, and Sigonella, Italy (next slide). Out here in the fleet, we relate primarily to the Pacific fleet, CINCPAC fleet and we take orders of course from our home office in Navy Environmental Health Center. We also have other primary war fighting customers, CINCPAC, Marine Forces Pacific, and we actually interact with all the major players out here in the Pacific (next slide). You've already seen how big the area is, and I won't go back into that after the excellent presentation by COL Navin (next slide). We have 40, about 40 personnel or small unit, we're actually a fairly small footprint, and about a third are officers, a

third enlisted, and a third civilians (next slide please). And these are our departments. We have an epidemiology department with two preventive medicine officer physicians, in fact both Drs May and Marino are here in the back if you have any questions later. We have environmental health officers, two entomologists, we have several industrial hygienists, and we also have a microbiology laboratory with a PhD microbiologist. We have a small industrial hygiene lab where we do about 16,000 samples a year from all over the Pacific. We have five civilian chemists that work in the laboratory (next slide).

Some of the recent activities, we were asked to about a year and a half ago to stand up a biologic weapons or detection capability, and we actually were able to assist, have been able to assist in several real world scenarios out here as eluded to earlier when there have been packages delivered usually from the mainland to residences here or to government offices, and we've been asked to help rule out whether or not anthrax is in the package and this type of thing, so we've assisted in some of these scenarios, actually three of the scenarios we've assisted in. We've developed a chemical, biologic, radiologic, environmental, we call it CBRE for short, medical treatment course, medical management and treatment course, and we're taking this on the road to military personnel around the Pacific Rim. It's a three-day course, we also have a one-day course. We also maintain a forward deployable lab, which is a kind of a 911, rapidly deployable laboratory and (next slide please). You can go to the next.

And I guess the last thing there is we have participated in quite a number of humanitarian assistance exercises and operations in Indonesia, in Irian Jaya, Laos



and Cambodia (next slide please). We've worked on the Japanese encephalitis vaccine, serosurveys out here in the Pacific. We've participated with the joint task force full accounting group. Joint Task Force Full Accounting is the organization that is tasked with recovering remains of missing servicemen in Viet Nam, Laos and Cambodia from the Viet Nam War. As you know these hearty individuals work for about 30 days in very rugged and remote environments in southeast Asia and actually along with the Navy lab in Jakarta we have initiated actually several years ago, pre and post deployment blood draws, serosurveys for infectious disease among those personnel. Our epidemiologists recently actually around November worked up an outbreak of scrub typhus that occurred among some Marines who were working out a Camp Fuji in Japan. And this is just giving you a slice of life of some of the things we do (next slide please). We worked out in East Timor. We had eight of our personnel deployed for over 400 person days in East Timor, and all these are preventive medicine type personnel and technical folks. We have worked with the Commander in Chief Pacific, the medical mission up there with a cooperative engagement with the Russians. So we've found ourselves in a lot of places doing a lot of different types of humanitarian and engagement activities, really all over the Pacific Rim. We also are very involved in all of the major military exercises here in this area of responsibility including, Cobra Gold, which is a very large annual exercise of all the military out here in Thailand, and Tandem Thrust, which is an every other year exercise in Australia, coming up this May and some of the other smaller exercises (next slide).

Just some photos. This is, we were, our personnel spent about a total of over a year person days down in East Timor during that operation, providing what we call Force Health Protection, is a new buzzword. Basically it's preventive medicine type services (next slide please). Of course that was a heavily endemic area for malaria and dengue and Commander, CAPT Yund here spent quite a bit of time down there himself, and a lot of work was done in that area. We were asked to stand up a chemical, biologic capability about a year and a half ago, and so we've been going through some training there to do that (next slide please, next slide please). Those are photos, for those of you that recognize that, going through what's called the confidence chamber where you basically walk into a concrete bunker and are gassed. This is our field detection lab, BW detection lab, this is one of our advanced laboratory technicians using a hand-held assay to test a sample before some of the visitors that are watching how we do this in the field (next slide please). This is a capability of, kind of a fly away capability that we can actually place some of our equipment on a commercial plane, if we have to, to fly to an area to assist our military personnel if called upon (next slide please). This is what the hand-held assay kits that we utilize look like. They're basically like a monoclonal antibody kit, and this we get through the Navy, and this is not FDA approved, this is just a test kit that we have for official military use for, to test samples (next slide please). And then we do have an ELISA set up where we can test another group of pathogens (next slide please). We also have the RAPID kit, the Ruggedized Advance Pathogen Identification Device, this is a DNA analysis by PCR and it can detect a number of pathogens, depending on how many primers you have. Right now we have the

primer primarily for anthrax and should be getting additional primers to be able to take this to the field and have it available in the future (next slide please). This is just a shot of our laboratory and this was our very first episode with an unknown package, so we took all the precautions that we had. We say out here that we suffer from the tyranny of distance, and that is we don't really have a national resource laboratory out here, we don't have a Fort Detrick, we don't have a CDC, we don't have a BSL 3 or 4 laboratory out here to deal with some of these things, so we do the best we can with what we have and this is what we did at that time (next slide please). This is a Hapsite down in the right corner. It's a new instrument that is a portable gas chromatograph; mass spec and it can test well over a hundred different agents for, or chemical agents, and identify them fairly rapidly. We have just gotten this piece of gear. It's about \$130,000 piece of gear and actually have trainers coming out within about two weeks to train our team members on how, mainly our industrial hygienists on how to use this. We expect to be able to take this to the field in any exercise or any operation, not only to test for chemical warfare agents, but other chemical type agents that might be, any commander might want to know what's lying on the ground, so to speak, so this is an expansion of our chem-bio mission (next slide please).

This is our forward deployable lab. It's a very small footprint. We can send as small as four personnel, one microbiologist and a couple advance lab techs and we have deployed this laboratory capability in Thailand, in Australia, and even in Saudi Arabia and other areas, but it's, you can see it can come right of a tent there and obviously there is a limit as to what type of things you can do in that, a rather dirty

environment like that, but that's the beauty of this lab, you can throw it on an Air Force pallet and be gone pretty quickly (next slide please). This is just again a slice of life of some of the epidemiology that we're able to do, that Doctors May and Marino did with this particular scrub typhus outbreak that occurred back in November, and (next slide please) there were about 10 cases I think among the Marines there. They did, we were assisted in the ELISA confirmation of the seroconversions of the Navy lab back in Bethesda (next slide please). This is the base camp for Joint Task Force Full Accounting out in Laos, and this where usually about up to 100 of the Joint Task Force Full Accounting individuals will fly into this base camp and then usually in groups of 30 go out to the digging sites, and the dig sites are usually or are mostly former, or sites where the airplanes have crashed back in during the Viet Nam War. And so our people have gone out, entomologists and environmental health, sanitation specialists to assist with evaluation of the base camps, and this shows you a little bit about where some of our people go on assignment (next slide please—you have to hit it a few times there, I think, Dr. Yund, one more time, one more time).

And this is a study that has been a collaborative study with CAPT Campbell's group at NAMRU2, the Navy Medical Research Unit 2 in Jakarta and also out at AFRIMS, the Army lab in Bangkok has done some of the, some of the testing, laboratory analysis for scrub typhus. And what we've done is done pre and post deployment blood draws on a number of the Joint Task Force Full Accounting members who have gone to these missions and they've come back and they've complete questionnaires, and the rate of seroconversion to scrub typhus is about 4

percent overall, and most of these are actually asymptomatic. And this is among individuals who are all taking doxycycline daily prophylaxis for malaria. So this is just some of the types of epidemiology that's very critical to us out here in protecting our troops and we're trying to document what the medical threats are (next slide please). Well this is my favorite Walt Whitman quote, and this is actually a true quote from Walt Whitman, and it's been one of my pet topics out here, and I've been fortunate enough to have two back-to-back tours at EPMU 6. I've really enjoyed all the work we've been able to do, particularly in Thailand with enteric disease. When our troops deployed, ground troops deployed to Thailand, for example, up to 30 to 40 percent, sometimes even more of these troops are impacted by diarrhea. Now obviously it's not fatal, but they are usually knocked out, and it can really impact a unit, so (next slide please), so we've done a lot of work, and this is collaborative, this is with the Army and the Navy research units and this is actually in Korot, which is north, several hours north of Bangkok, during an exercise in '95, and this is an Army field hospital where I worked. We had about 40 percent of the people coming to the field hospital had diarrhea, and mostly its *Campylobacter jejuni* (next slide please). And here we are. We set up with a lab right there in the Army hospital. We had a great, collaborative, tri-service effort there (next slide please).

We do a little epidemiology here on Oahu occasionally. We, a couple of years ago we had one of the flight surgeons at Barber's Point call us up and say, you know we've got an outbreak of what looks like influenza illness here in my squadron, and the only problem is you know I immunized all these guys about two months ago. Well, this raised, this perked our interests, and we went out and did a

little investigation, and we identified A/Sydney which at that time was coming into our island for the first time and had not been incorporated in the influenza vaccine, so we're able to, this happens quite frequently, actually. We've noticed a number, and of course this can really impact a unit, particularly on a ship, and if you, it really is rather discouraging to give everybody their shots and then a new strain comes along and gives everybody the flu. So we try to really stay on top of that and document that if we possibly can (next slide please).

Our environmental health officers are basically food and water sanitation specialists, and they go out on our ships and conduct inspections and technical assist visits (next slide please). And this is just a shot of our people over in Russia, Vladivostok (next slide please, we're almost done, I think, next slide please, another shot please, next slide). Our entomologists on the ships (next slide please). Entomologists in East Timor setting up some live traps (next slide please). Entomologists, as we say, spray 'em and slay 'em, in Thailand (next slide, next slide please). Same thing there. One of the very important missions of our entomologists, particularly when our troops go to the host country is the wash-down. Obviously, there is a lot of equipment that's involved, and these wash-downs can take up to two weeks time before they, all this equipment is shipped back to particularly to the mainland United States or to Hawaii. Very strict, all these people have to have US Department of Agriculture certification to do these wash-downs. It's a very important and critical part of any exercise, and our entomologists are so certified, and go out and assist with, for example the Marines, with these types of wash-downs.

Palau (next slide please), this is one of the humanitarian missions we've conducted in the last couple of years. A couple years ago there was quite a large dengue outbreak in the Republic of Palau. Assistance was requested, as Admiral Wright alluded to earlier through the embassy, through the Commander in Chief Pacific and EPMU 6 was tasked to come up with a team. We came up with a team of about 10 to 12 people, put together a program, sent out a site visit, and had actually a very good program for several weeks in Palau with the dengue. Again, another humanitarian and disaster relief effort frequently preventive medicine folks are called upon to involve themselves—this is just a rather dramatic photo of a bygone operation where we assisted Bangladesh (next slide please).

And then some of the other projects we've been involved in, we've done sexually transmitted disease behavior and epidemiology out in Thailand among the US troops, again enteric disease epidemiology among our US troops in Thailand we've done just about every year since I've been here. We did some work with Ross River virus in Australia while we were down there in 1997, actually isolated virus from American servicemen. And we've done some, we've had a problem on our ships, particularly our aircraft carriers with Norwalk virus. We did an outbreak work up on one of the carriers in 1997, again along with NAMRU 2 in Jakarta. I mentioned the dengue in Palau, and we've had quite a bit of medical work that we've done down in Indonesia with collaborative effort with the Indonesians down there and particularly even in Irian Jaya (next slide please).

The issues that we think are important that you all will act on as AFEB, any type of personal protection issues that you discuss or that come before you that relate

to deet, promethran, those are very important to us. We are probably the foremost proponents of personal protection out here in the Pacific, so any issues that you might have before you on those are very important to us. Malaria is a very important issue to us. Chemoprophylaxis, for example the primaquin issue, should it be used as cause of chemoprophylaxis? I'm not here to argue either way, I'm just saying that that's a very important issue to us and you provide tremendous expertise and assistance to us when you act and when you provide your opinions on these issues. Of course Japanese encephalitis virus, we're hoping for eventually new and better vaccines. We did some work earlier to assist with a booster interval question. Any vaccine issues are always on our front burner, we are very interested in your comments on that, and any travel and deployment health issues—we run a travel clinic also at our unit—anything that has to do with travel medicine or deployment issues (next slide please, I think that's about it). We think that we provide a big bang for the medical buck for the Navy. We're a very small footprint, like I said 40 personnel, a small unit. We do actually have a great deal of fun in our units and do a lot of good work. Thank you. I think that's about it, end of the brief. Any questions, please? Yes, sir.

**Dr. Ostroff:** With the anthrax hoaxes and some of the other things that you've been dealing with, what's your interaction and relationship with the state health department, in particular with the state lab? (CAPT Beecham: Right). I actually visited the state lab when I was here in the fall and was astonished at the facility; I mean, it's one of the most lavish state laboratories that I've seen in any



state. I don't know why but it just sits way there up in the hills over Pearl Harbor, but it's an unbelievable facility.

**CAPT Beecham:** We have been totally integrated with state, not only the health state department, but Honolulu police, the fire department, the Haz Mat teams. We have been meeting with them actually ever since the first letter incident that occurred in February in 1999. And we, the state health department wrote up actually a protocol for how to handle biologic events, and EPMU 6 is in the protoCOL We are allowed by a memorandum of understanding to respond to civil authorities in cases of emergencies. And for longer standing issues, we usually have a memorandum of understanding and this type of thing. But we are actually in their protocol until they are able to basically come up with a diagnostic facility and this type of thing to handle it on their own. So, we're integrated with them, we have exercise with them, tabletop as well as there's another coming exercise, so we've been very involved with them, not only with the state health department, just with civil defense, state health, haz mat, the whole group.

**Dr. Patrick:** I was very impressed with the activities down in San Diego. But I have a question: you mentioned some of the behavioral surveillance that was done in Thailand. What sort of behavioral interventions were you using to address public health risks?

**CAPT Beecham:** Not really, the one I actually had up here refers actually Dr. May did a study I believe it was in 1995 during the Cobra Gold exercise in Thailand and it was a sexually transmitted, well not sexually transmitted, it was a sexual behavior study, and it had to do, she actually administered questionnaires to

each of the services to members in each of the services concerning sexual behavior during deployment and during liberty, etc. And she also, the behavioral aspect of it, she figured into alcohol behavior and this type of thing.

**Dr. Patrick:** I guess my question is, do those fall under your purview as far as surveillance or intervention?

**CAPT Beecham:** Oh, that was definitely not intervention, that was surveillance right. You're right we have to be very cautious because we are a preventive medicine unit; we're not a research and development unit. We're not paid to do research. Anything we do is epidemiology and even the Japanese encephalitis booster interval blood draws that we did we did as a result of an epidemiologic question as to who has antibodies to JEV and how many vaccines have they had and that type of thing. It was not an R & D project.

**Dr. LaForce:** Ok, let's move on. Some of us think you have a pretty good job.

**CAPT Beecham:** It's great.

**Dr. Patrick:** I still didn't get, I didn't hear an answer to this, and it's again people are doing behavioral research on things that relate to ??? I guess I'm wondering ??? as far as public health ???

**Dr. LaForce:** Why don't we take that up during the discussion time later. Let's go onto PM issues in the Pacific region with COL Wasserman. This will be the last presentation before we have open discussion. We want to come back to Kevin's points in that discussion. COL Wasserman.

## **PM IN THE PACIFIC**

**COL Wasserman:** Ok. Good morning distinguished AFEB members and colleagues. The scope of preventive medicine activities in the Pacific is considerable, and what I intend to cover during this presentation is the range of preventive medicine activities using the discussion period afterwards to kind of go into more detail about the activities in the Pacific (next slide please). As chief of preventive medicine at Tripler Army Medical Center most of my time is engaged at the operational level, with installation based preventive medicine activities. Each of the services have preventive medicine staffs to ensure that their posts, bases, ships or medical facilities follow all the federal, state, DOD and respective service guidelines. You've already heard that there are about 250,000 service members in the Pacific theater. According to PACOM there are about 150,000 dependents, and there are a little under 100,000 civilian employees. So that's almost a half a million people. That's a huge responsibility for preventive medicine. About half of our population is located here in Hawaii, and this is a strategic location because we are part of the United States, yet we're kind of at the edge of the Pacific theater, and therefore we want to sustain a healthy and fit force at home, but also to prepare for deployments when we're called upon (next slide).

Theater based preventive medicine activities are CHPPMPAC, which as you know is short for the Center for Health Promotion and Preventive Medicine in the Pacific, located at Camp Zama in Japan, also there's the Air Force Institute for Environment Occupational Health Risk Analysis, which is AFIERA, which is located in Kadena Air Force Base, and there's NEPMU 6, and you heard an excellent presentation from CAPT Jim Beecham. Their mission includes preparing for public

health contingencies in the Pacific theater, and they also provide consultation and back up for installation based preventive medicine activities. For example, when we have a problem in Schofield Barracks that's beyond our capability and Schofield's capability to handle it, we'll call on CHPPMPAC for assistance, and if they're not able to provide sufficient assistance, they'll call CHPPM Main in Aberdeen, Maryland to help provide the resources that are needed (next slide please). Both the Army and Navy have research based preventive medicine activities in the Pacific theater. They have as part of their mission the investigation and development of counter-measures for problems for which we don't have current standardized solutions. So they're involved in tropical disease vaccine development, drug testing, vector control, and surveillance for emerging infectious diseases that may impact on US service members when they're deploying in the Pacific theater. COL Dennis Shanks and CAPT Mike Myers are going to talk tomorrow. They're the commanders respectively from AFRIMS and NAMRU2, so I won't go further on these preventive medicine activities (next slide please).

Again the three basic types of programs are installation based, theater based, and research and development. The installation based preventive medicine activities for each of the services have a similar scope, covering environmental health, occupational medicine, communicable disease prevention and control, and community health nursing. But each of the services does something a little bit different (next slide please). Environmental health is engaged in food service inspections, drinking water monitoring and testing, day care inspections, swimming pool inspections, and as you can imagine in Hawaii swimming pools are a year round

activity, pest management because we're unwilling to live in harmony with our pests and this being a tropical environment pest management is incredibly important. And last and very, very important is environmental quality and compliance. In Hawaii we have a very unique sensitivity for the environment and very much an appreciation for the beauty that is Hawaii, and if you can picture Hawaii as an island, say you're bringing chemical substances here, what you want to do is make sure they're destroyed or sent off island at least as much as they're brought on island so this beautiful paradise doesn't become a toxic waste dump, so we're very sensitive about that. At Tripler we have eight different medical waste streams. Each has its own logistical system, and we monitor those for compliance very thoroughly, so I think we're very good stewards of the environment here (next slide please).

In occupational medicine, we have worker risk evaluation and education, we have medical surveillance for high risk occupations, we provide medical case management for occupational injuries and illnesses, industrial hygienists evaluate and monitor the workplaces, and we have a very good health physics support to assure radiation safety. Tripler being a hospital, disease control and epidemiology is especially important. We also have a role in the community for monitoring diseases as well. In this section they provide medical surveillance and reporting both to DOD through CHPPM located at WRAIR, as well as to CDC through the Department of Health. We also have a very active hospital infection control program, and you can imagine with JCAHO, this takes on a very high level of importance and support from the command. And we also perform outbreak investigations in this section (next slide please). Our community health nursing program is very active here, that we

have the chief of community health nursing in the back here who has done a phenomenal job at getting resources and developing a very comprehensive program that's population based. When soldiers come on island and their families, they have health risk assessments provided using the HEARS tool that you've heard about. They provide education for patients, as well as for providers in the hospital. They have disease prevention classes like HIV prevention. They do child development service activities. There's a special group of community health nurses who provide special counseling and support, home health care visits to families that are high risk for child abuse or neglect. They do a phenomenal job, and they do that for Army, Navy, Air Force, Marines and Coast Guard. Lastly we have a very soldier and family oriented health education program out at Schofield Barracks. They have a program that is in collaboration with the chaplains called Fit and Ready Families to make sure that the soldiers are healthy, both in garrison and when they're ready to deploy, as well as their families (next slide please).

Though most of the DOD activities in Hawaii is ultimately to support the go-to-war mission of the military and to support contingencies in the Pacific, therefore an important role of military preventive medicine is to provide support for military deployments and we call this Force Health Protection. CINCPAC instruction 6200.2 essentially took the DOD health affairs guidance on force health protection and made it a command-driven program, so here it has very strong command emphasis and support. CINCPAC instruction 6200.2 provides guidance for providing medical threat assessments, immunizations and chemoprophylaxis and education training for service members. It also defines the employment, pre deployment, deployment and

post deployment surveillance based on risk assessment. It's even more stringent in this respect than the DOD health affair guidance for providing these deployment surveillance when our troops deploy, whether in small groups or in large groups (next slide).

As you've heard, almost all the deployments in the Pacific theater are joint, and there are slices from the Army, Navy, Marine Corps, Air Force, and then there's additional support from their respective reserve components. A potential problem that we initially encountered was that there are some differences in the way that each of the services provides preventive medicine, and that this could create confusion for the service members when they go some place. For example, in East Timor we had Army, Navy, Air Force working alongside the Australians and Singaporeans, and it was important that everybody be operating off the same sheet of music, otherwise the service members would be confused, and the service providing support would be confused. CAPT Jeff Yund was one of the charter members of our joint preventive medicine working group, and he was the first out in East Timor, providing Force Health Protection and after him, and he did a phenomenal job, after him there's the other services rotated, and we recently sent LT Smalls there for a 90-day rotation providing service, so it's important that all the services are on the same sheet of music. In the Army, we prefer to use mefloquine, for chloroquine resistant plasmodium falciparum, and the Navy and the Air Force and the Australian Army preferred doxycyclin, so we all agreed to use doxycyclin so that there wouldn't be any confusion amongst the service members or the people providing support. There are some differences in the way we use JEV vaccine, even PPD testing, so by getting

together quarterly, we resolve these differences, and we also have an opportunity to share our knowledge and experience. This proved to be useful in medical care delivery, for example the influenza vaccine shortage that we had this year, we were all able get together and discuss how we were going to solve this problem jointly so that there was equitable and fair distribution of the vaccine, and a similar policy towards all their medical beneficiaries (next slide please).

Medical surveillance is currently a growth industry, particularly to the importance of emerging infectious diseases and our ability to prevent them. Medical surveillance is vital for preventive medicine preparation for deployments. Currently, there are several DOD programs to assist with various aspects of medical intelligence preparation to include the Armed Forces, Medical Intelligence Command, the Center of Excellence in Disaster and Humanitarian Assistance and the network of overseas research laboratories that contribute to DOD global emerging infection surveillance, and COL Dennis Shanks, and CAPT Mike Myers are going to talk in more detail with this tomorrow. Tripler has also provided support to global emerging infectious disease through participation in antimicrobial resistance surveillance. We have a cooperative research and development agreement with private industry at Mario Labs with DOD GEIS. We are also working with CDC and DOD GEIS on gonococcol isolate surveillance, because the incidence of resistance to fluroquinolones in QC increase from 2.5 to 9.4 percent within the past two years, so we feel this is important to look into and see if there is a component from the US military. And we've also participated in the Air Force's program, Project Gargle, for influenza virus surveillance. With COL Takafuji's arrival we've



been able to even further expand. We're firing reagents to help support diagnosis of weapons of mass destruction, you know the bio-terrorism agents, and we're also getting reagents to support developing a Pacific regional public health laboratory, so that specimens that are obtained in the Pacific theater can come to Tripler as opposed to being sent back to Washington, DC or the CDC. So this should make it a little bit easier because of the huge distances and time difference in the Pacific region (next slide please, next, next). Ok, we can use part of the discussion period to answer questions or drill down and get more details. Also one area that I notice wasn't covered, was the malaria issue in Korea, so I have some additional slides if anyone is interested in more information about the situation there. Thank you.

**Dr. LaForce:** Thank you.

**COL Wasserman:** Any questions?

**Dr. LaForce:** Questions for COL Wasserman? If we could get, if we have ten or fifteen minutes of time I want to come back to Kevin's question about the interface in terms of the behavioral of disease prevention, and perhaps you want to reiterate your question.

**Dr. Patrick:** ????

**COL Diniega:** I'm Ben Diniega from Health Affairs. You know the whole issue of taking scientific results and translating them into policy programs, and I can tell you from the Health Affairs perspective in the few months that I've been there, they are doing some looking for indicators, surveillance results, that lend itself to policy. There are several committees that have been set up that have been of particular help. STD issues There is an STD prevention committee, at the Health

Affairs level, which is putting together an STD prevention action plan. In fact CDR Ludwig is on the committee. For other areas, alcohol there is an alcohol prevention and abuse committee and if they can put their action plans together and forward, then policies are developed. It's a matter of finding out all the different pieces that current throughout the services, getting the information in one arena. It's very true that there is a split between people who do the research and the surveillance. But the bottom line is at the unit level prevention programs work if we have sufficient data.

**Comment:** I was going to say also at the functional level, I can't speak for the overall policy level in Washington, DC, but at the functional level enabled health research center at Pt. Loma has done a number of behavioral type studies. I think that's what you're asking about, behavioral research, and they have either conducted it themselves or actually contracted them out, and that's received funding too. I know they've done some sexual behavior, high-risk behavior studies, and this type of thing. I don't know how, the policy was made that led to that, but I know that the NHRC, Naval Health Research Center, which is down under the Navy Research and Development Command has conducted some of these tests.

**Dr. Patrick:** ???

**CAPT Schor:** This is Ken Schor, from headquarters, Marine Corps. You know I think that's the key thing. You have the units that do great things and they collect data, either as a focused effort or a routine effort. You have us policy folks in DC who are doing big program things, and yet research is coming in through Naval Health Research Center and through the manpower shops like Semper Fit and folks like that. It's, the challenge that I certainly feel is trying to keep that all together so

that it is focused on the operating forces, and I think there's a couple of echelons in between the battalions and the policy and the research, and that's where you really have to kind of grab it and try to put it together and bring the resources to bear on those kind of health promotion issues, so I think that's where a lot of effort would be well spent to focus resources and at least attention to show where the fault lines connect up or don't connect up.

**Dr. LaForce:** You know I'm reminded of, I believe it was two AFEB meetings ago, maybe it was three where there was a remarkable presentation for or a pairing of presentations that looked at the issue of alcohol use and cigarette smoking where there were presentations at the base level where the behavioral issue was at either the officer's club or the various clubs, that it was just not acceptable anymore to, for any behavior that was permissive towards drunkenness. This sounds sort of, I don't want to sound too Messianic or anything, but to me it was one of the most sensible presentations that was very clear on that base, that from the top down, that that was just not acceptable. And what happened over a period of time, was that there was change that actually occurred in terms of the accidents that were associated with alcohol use within that particular base, which for us and for the board members I thought was one of the most powerful presentations because it showed that if there was interest from the base commander, all the way down through the system in terms of actually setting examples, that that really appeared to change behavior. Now you may say, Ken, that this is an isolated incident, etc., but nonetheless I thought it was a very powerful example because it showed that you could actually change a behavior.

**Dr. Patrick:** Sounds like a kind of environmental protection of some sort.

**Dr. LaForce:** As I've said before, I've forgotten the actual, the name of the presenter, it's a year ago or something, we could certainly look it up, and it was again paired with presentations that were looking at the use of tobacco, alcohol, and sexual behavior.

**Dr. Ostroff:** Just to change the subject and to bring up that nasty issue, my recollection is that Tripler has been sort of doing the most comprehensive monitoring for adverse reactions to anthrax vaccine, so where does that fit in terms of responsibility for that particular program?

**COL Wasserman:** You mean policy wise?

**Comment:** I'm the one responsible for that project. We started out with 600 people. We followed them over time. Some of them PCS'd like with the ??? are like a separate code word for analysis, we're still working with that. The study itself, that particular part of the study is over. The study itself has kind of run its course self-evaluating health status?

**Dr. LaForce:** Well the question is, I think what we're referring to as far as the board is concerned is more congratulatory, because the board has really been very impressed over the last two years of the sequential presentations on the anthrax vaccine, and a lot of the most detailed work is coming out of Tripler, and we just want to say thank you, because this is one of those hot topics, and as in any other hot topics we're always sort of powerless when we don't have the data, but this is one time when we think the data are of very high quality, and a lot of that has to do with what you all have done here. So from a board standpoint, it's just that we'd like to say thank you because when the questions have come up and we've been asked to

write position statements in terms of anthrax vaccine and the safety of anthrax vaccine and the efficacy of the program that's been put into place I have had no trouble whatsoever in either talking to reporters or writing things to that effect. All right what we should do, unless there are other questions, why don't you go ahead with the preventive medicine or PM Updates. We'll begin with Ben Diniega.

**COL Diniega:** You have no choice.

**COL Withers:** Yes as usual you co-opt me. Let me say as long as we're starting this, we've got nine of us and roughly 55 minutes, so that's about 6 minutes each, and that's with questions.

## **PM UPDATES**

**COL Diniega:** Right. Here we go. First of all, as you all know I'm now at Health Affairs, but I'll continue to help Ben Withers with the meetings, the next meeting and this one until Rick Riddle steps in on 1 May to take over full time. Dr. Jarret Clinton sends his regards, and he's sorry he has to send instead of him coming. Dr. Clinton will remain as the acting assistant secretary of defense for health affairs until President Bush appoints a new assistant secretary. Guesstimates among the senior executive service types that have been in government for a long time said that may take up to a year before he can come back and work in our office in Health Operations Policy. But I see him almost on a daily basis. I have several issues and I'll just go down the list. Influenza. In the military all 2.8 million doses were delivered to MTFs by mid-January. This compares with a national usage of 90 million doses. On 30 January Miss Linda Canas, who is the chief of virology at the Brooks Air Force laboratory put together a summary of the DOD influenza

surveillance program and the GEIS surveillance program and Project Gargle that presented the DOD surveillance for influenza to the FDA vaccine related biologics advisor committee meeting that was held on 30 January, and I attended as the DOD representative. It was very well received. She works with CDC in sending specific specimens over for analysis and contributes to the national surveillance program.

The results of the VRBAC meeting is that H1N1 will probably remain the same next year and the H3N2 most likely will remain the same, but they received some specimens just prior to the meeting from China, so they needed to take a look at those H3M2 specimens before making final decisions. Then the B's component will probably move because of evidence of antigenic drift, and that component will probably be switched, but they're going to wait another month before making that final decision and picking the strain to move to. BW threats. Our annual meeting in May is focused as the board members know on reviewing the chairman's BW threat list. It's not clear whether or not they're going to come out with a new threat list this year, however, in the past the board has recommended that a medical risk assessment be done because the threat list and the prioritization is based on a most likely use scenario, rather than a medical scenario. And I'd like to tell the board that the medical risk assessment project undertaken by the Army Surgeon General's office as the executive agent for chem-bio medical issues was held. They had a military panel in December, this past December, and I was lucky to be a member of the panel, and we looked at the impacts of BW use on various part of our field deployed forces. And then a scientific panel met in January of this year. The results are being put together and will be presented to the board at the next meeting in May.

Also on the influenza issue, Miss Linda Canas has agreed to present a wrap-up of the influenza in DOD program in May also. The anthrax issues. John Grabenstein will be speaking to the board on an update and also on a different initiative between CDC and DOD, but there are two Institute of Medicine committees of interest to the board. One, the CDC has asked the IOM to review their anthrax vaccine research program, which includes an optimization of the current anthrax VA schedule, immunization, so a shortening of the doses, primarily. And I think it also talks a little bit about looking at second-generation anthrax vaccines. DOD on the other hand has asked IOM to review the safety and efficacy, which there are a lot of issues about in the press, of the current vaccine that we use. So those are two IOM committees that we've been monitoring up at Health Affairs.

Part of the CDC's program talks about a new initiative, a joint initiative between DOD and CDC, and that is to establish military vaccine health centers throughout DOD and probably involve the VA also, and although the term is Vaccine Health Centers, the initial focus will be on the anthrax vaccine. Part of the structure that they're looking at as a way to provide scientific guidance to this initiative is for the ACIP and the AFEB to form a joint advisory board of some sort, so Dr. Grabenstein will be presenting an information brief to the board tomorrow on the military vaccine health center concept and the initiative, and in May I will be submitting a letter request to the board, to the president and to the board to look at forming a sub-committee to join up with ACIP sub-committee, which has already been formed, by the way. Those are the major issues. Are there any questions? Or you may want to hold your questions.

**Dr. Ostroff:** One question from the Health Affairs perspective, what are you currently doing as far as the troops that are in there regarding BSE.

**COL Diniega:** I intended to have Scott Severn who follows the BSE issues for the DOD on the veterinary level at this meeting, but he couldn't make it, but he will be talking probably at the next meeting. It is being monitored. There's been several messages that have gone out from the joint staff and Health Affairs on food procurement, and there's all that issue with the blood donations. I think MAJ Balough has a comment on the BSE issues, but it is being monitored, and the board will be updated at the next meeting on the BSE issues, but specifically on procurement MAJ Balough could probably answer some of those. He'll be doing an update, so he'll be addressing, and then if there are any other questions he can answer them.

**Dr. LaForce:** Ben.

**COL Withers:** Thank you, Dr. Diniega for being so brief. Am I transmitting at all? Is this working at all? Ok, this is a balance between volume and snow, unfortunately. That looks good. First I would like to say how impressed I was at CAPT Beecham's presentation. In Army language we would call him a true Powerpoint Ranger. I'm not, and also, he calls his staff of 40 small, the Army Preventive Medicine Staff Office is me, so by comparison my slides are quite dull, but they're pretty. Anyway, I'm acting executive secretary, but I'm still the Army rep to the board, so here's our presentation (next slide please). These are the topics I'll be covering today, and I don't know why those "v"s are there, I didn't do that (ok, next slide). Our Army varicella policy has been admittedly a long time in the



making, but we're almost there. I'm in final staffing right now. We've decided to mandate it at basic training, USMA, and the prep school for USMA. And we're going to demand either documentation or screening and they'll be two screening options, either full serology on those who don't have documentation or a combination of history and serology. That system was developed at Fort Knox by Dr. Kneber and his system we're simply enlarging and we're offering that to all the basic training posts, if they don't want to use full serology, which is more expensive. I expect to have that out by the way, oh by March 1<sup>st</sup> (okay, next).

ARD stands for acute respiratory disease, a very important program, any time you have large training camps. This is a standing Army program that goes back many years. We conduct ARD surveillance at all of our basic training posts, and there are five currently, Benning, Jackson, Ft. Sill, not Ft. Bliss that's an error, excuse me, Ft. Leonard Wood, I'm sorry you don't have that. And Fort Knox. The program was last updated in 1990 and it's gotten a little stale. This revision is going to update things in terms of you know wiring, diagram, and modern conveniences that we have. More importantly, we're going to, as you know hospitalization patterns have changed over the last decade. We used to just hospitalize every trainee who had ARD, and that was an easy way to count them, because our hospital surveillance system was very easy. Everybody got a discharge diagnosis, and it was pretty good. Now we're, to save money we have infirmaries, in-patient, excuse me, out-patient wards, self-care almost, minimal nursing care, less expensive to run, they're not hospitalized. So we're reckoning with that problem so that we all count ARD cases and we all do it the same way so that we can compare our data from post

to post. And I'm also going to do my best to make sure that our PMOs at the training post can use CHCS to harvest the data from as much as possible (next slide). Ok, this is our next really major initiative, and this is really very exciting. Immunization tracking system is simply an automated database to collect all immunization data. We're going to follow the Air Force—they led the way on this about two years ago. We're going to use what we call MEDPROS. It's our standing database, which right now can accept everything; we just aren't doing it yet. It was built primarily for anthrax, and now we're ready to force all immunizations into it. We're going to start by inputting all active duty immunizations from this point forward, on 1 October 01, and then give everybody about six months to input selected, not all but selected, immunizations. This will be on active duty only (and last slide).

One of the board members asked me to address DU briefly. As most of you are probably aware over the winter holidays there were various news reports coming out of Europe concerning illness among European military personnel serving in the Balkans, specifically a cluster of leukemia and other cancers was reported in Italian Army troops who had been stationed in Bosnia. The allegation was that the cluster of leukemia was related to DU ammunition fired by NATO aircraft against Serbian targets in Bosnia in 1995 and in Kosovo more recently, 1999. The story then expanded to include other illnesses in other NATO countries such as Belgium, Portugal and Spain. Now we at the Surgeon General's Office were called upon to write information papers, reports, briefings, what not. As we responded to the allegations with the facts about DU, the lack of any association with human cancer, and the latency period for cancer, which in essence makes these charges, well, highly

unlikely, the story changed, shifting the focus to Benzene poisoning and the Italian Army practice of using pure Benzene to clean individual weapons. We don't do that in the US Army. Anyway, now our focus has been redirected to answering questions about the association of Benzene with leukemia, the use of Benzene in the US Army, and how we protect our troops and workers. While we don't feel this whole enterprise is worthy of much pursuit, subjective and political factors are forcing us there (next). Are there any questions for me?

**Dr. Sokas:** Do the Italians really use pure Benzene to clean their weapons, still?

**COL Withers:** Well, that's what we hear. I can't swear to it, but that's what we've heard. And it is true, Dr. Sokas, that soldiers, sailors and airmen, I mean we can all do stupid things, and groupthink does prevail in young people, young combatants.

**Dr. Sokas:** That part I understand, but somebody would have to supply them with benzene to do it, and that part makes no sense at all.

**COL Withers:** Thank you. CAPT Yund, I'm sorry Dana.

{Transcription: Tape 3}

**COL Bradshaw:** There's a case of hantavirus pulmonary syndrome that we had in a young airman out in Mountain Home, Idaho, but go ahead and go to the next slide here. I added that one on because I thought that the board would be interested in that and some of the issues that are relating to that. Also just wanted to lightly touch on some issues that actually some of the board members may know or even be more familiar with than I am, but our folks down at AFIERA down in San Antonio

have been very busy with a number of epidemiologic and environmental health studies, one with JP8 fuels, another one regarding the amyotrophic lateral sclerosis syndrome in the area around Kelly Air Force Base. We're also just probably touching on the same issue I think all the preventive medicine officers have been having to deal with which have been spoke on very well, which is depleted uranium, so I won't have to spend a whole lot of time on that one. And then just a very quick follow up on the AFEB TB recommendations and where we are in the Air Force with that, so if you'll go ahead and go to the next slide.

This was a young, 20-year-old young man that was airman, worked on the flight line, came down with a respiratory illness, quickly deteriorated, had to be transferred down to a local civilian hospital and then was there verified to have the hantavirus pulmonary syndrome. It was the, I guess it's Sin Nombre version of the virus and this has actually been known to be in Idaho before. They've had, this would probably be about the 15<sup>th</sup> case, and in fact in June of 2000, the use at CHPPM had actually come out and done an environmental survey at Mountain Home and had found upwards of 30 percent of some of the deer mice around the stables actually had the virus, and they had instituted some preventive measures at that point. There was a sofa that they used to keep out there that they got rid of, they taught them how to actually use bleach and wash down procedures, rather than sweeping when they found mouse nests, and so on and so forth. As it turns out, this individual didn't frequent any of the areas that were known to have problems, and wasn't an outdoorsman or anything, and actually to date as far as I know we haven't really found where he might have actually come in contact with any of the fomites

that are related to that, but did indeed become very ill with that and seemed to be doing ok. So basically they're just trying to reinforce the counter-measures that are in place and do that about the bait, get the public relations announcements out and so on and so forth, but that is a new case. Just very quickly I'll show you some of the background that goes with this (next slide).

These are the hantavirus cases over time. The one, this is a seasonal kind of view of it, the blue one of course is the recent case that's just been identified. Of course, we're in touch with state health department, CDC, and also the folks down in New Mexico that are experts with this (next slide). This is just the cases again over time since 1978, some of these are retrospective diagnosis, and then some of them have been prospected since 1993 as we understood what was actually going on here epidemiologically (next one). This is the distribution geographically in Idaho. The blue dot is of course where Mountain Home is with the case that we've just had in the Air Force (next slide). Just real quick on the exposures to JP-8, this is of course of interest to us in the Air Force and also in the Navy to a certain degree. We moved from JP-4 to JP-8, because JP-4 was more explosive, the other one had a higher I guess evaporation point, so it was a little bit safer, but we did change over at some time in the past and we used quite a bit of it over time, but there were some problems with no national exposure levels, not really understanding all the toxicology of this. There's some evidence in animal models of neurologic problems, dermatitis and other things, and so we decided that we needed to do some more prospective studies looking at issues with this (next slide). Some issues about how that with inhalation folks will come up with levels of this much above those folks that would not be

exposed to these or working around it (next slide). Different things that may occur in animals, a lot that we still don't know about in humans (next slide). These are some of the data gaps that we hope to address with the study (next slide). This is design, a short term cohort exayme, using people likely to be occupationally highly exposed and some who would not be as exposed, in looking a lot at neuro-cognitive type things (next). And a lot of the people that are collaborating on this, a number of people, organizations and institutions (next slide).

Just very quickly on ALS in Kelly. This came up after a series that the San Antonio newspaper did, looking at this. They provided from the local ALS society 31 cases that were purported to be problematic there. The San Antonio health department looked into this, found 20 cases in Bexar County there around San Antonio, but the rate of 1.49 per 100,000 would be what we would expect from background (next), and only two of those, by the way, were adjacent to Kelly. AFIERA has looked at this from the occupational point of view, looked at the 31 cases again. Only 14 had an occupational relationship to Kelly Air Force Base. They looked at expected rates, calculated over a 23- year time span, and they had thought that you might have between 15 to 43 cases over that time, which was consistent with what they were finding, however, the local society did an non-epidemiologic calculation of their own and released this to the media, which said that there was a four-fold increase, so AFIERA is going to pursue this more completely (next). Just briefly this is what Ben has already addressed. DU is actually very excellent munition, and if you have time I'll tell you some of the stories that came out of the Gulf War with this, or you can look them up yourself on the Gulf Link

website, but the issue I think really is that there hasn't been enough latency period to develop leukemia, nor have any of the extensive studies of DU have really shown that there's a link with cancer, and again its main toxicity is actually as a heavy metal, kidney problems, things like that, not really the radiation because it's depleted and much less a problem. And actually, even though we left about 230 some odd tons of it in the desert, in Kuwait, when they calculate it, what's actually in the sand, the distribution is not any worse than what you might otherwise expect. The people who really have the problem are people that have fragments, and then again it's a heavy metal toxicity issue (next slide).

Just quickly, this is the funny font problem I think we have between computers, but I showed a slide similar to this before when we brought up the TB issue, just the issues of where we have people assigned, and that seems to really be the problem with this for risk. One of the recommendations that I think you came back with was if people are assigned to an area that the risk is higher than the United States, then that's who you ought to screen. Problem is, that's Canada and Australia, and that's about it. So I think what we have kind of looked at is maybe Western Europe is pretty close, so we're thinking about maybe just the folks that are assigned to Europe that we probably will not worry about screening them, but definitely people in deployments where they might be working refugees or so on, and that's sort of where we're trying to practically go with it. The last thing is just to also key on what Ben Withers was saying, with immunization registries, we're trying to go the next step in the Air Force and go to doing all our beneficiaries, all our children, and we're about halfway through that process. We gave them a year to try and get

people age 2 and under up to date, and so I'm going to put off maybe till May or so to give you a progress report on how we're doing with that, but we're actually working on that, and I'm sure you'll be interested in kind of where we are with it, but we'll bring that up maybe at the next AFEB meeting.

**Dr. LaForce:** Thank you. Questions?

**Dr. Sokas:** I have several comments on the, I mean leukemia is one of those outcomes that you can have a fairly short latency period for, so it's not so much the latency period I think it's that as COL Bradshaw pointed out the deplete uranium really doesn't, is not an exposure that's been associated with cancer in any form, is unlikely to be associated with cancer in any form, and the studies that have been done on people that have been carrying fragments around with them have shown marginal changes in kidney function but other than that, nothing. So the exposure, the connection between the exposure and the outcome is what's not making sense here, it's not the latency period.

**COL Bradshaw:** Well the latency period is what 2-5 years, or something like that, for leukemia?

**Dr. Sokas:** For leukemia in general, right, yes.

**COL Bradshaw:** And even that's sort of marginal for biologic plausibility.

**Dr. Sokas:** Right, right, right.

**Comment?:** I think the issue of the thing is, that if radiation is not an issue for cancer or leukemia, those precursor cells within the bone marrow, the radiation is not even exposed close enough for the DU (right, right, right) to even cause leukemia, so it's a biologically implausible scenario.



**Dr. Sokas:** I'm not trying to suggest that there's a thing going on here, I'm just saying that the reason is not the latency period, the reason is what you've just said, that there's really not an exposure-outcome connection for DU for that outcome.

**Dr. Ostroff:** I just want to make a brief comment about the hantavirus. Deer mice are somewhat unusual in that they don't hibernate, so they constantly have to forage for food, and they do so even after snowstorms in the western part of the United States, so they're active all year round, and so there is conceivably hantavirus cases that occur all year round, it's just that the humans tend not to be so active in the winter as they are other times of the year, but...

**Dr. LaForce:** Unlike the deer mice.

**Dr. Ostroff:** Unlike the deer mice, but you can see cases in January in places like Idaho.

**Dr. LaForce:** Jeff.

**CAPT Yund:** Sir, thank you. Thanks to all of you for participating and your service to the board. It's much appreciated by DOD. I'm Commander...I'm still calling myself commander. Five days ago I was a commander, but now I'm not. CAPT Jeff Yund from the Navy Bureau of Medicine and Surgery. Says Navy Preventive Medicine Update, but it's going to be really a one-topic update. I'm going to talk a little bit about a few of the recent things that have gone on with the adenovirus (next slide). Some of this, you may have heard a bit of, a bit about adenovirus in previous presentations when I wasn't present, so I'll skip over, or go briefly over some of these things. As you all know, the oral vaccines for types 4 and

7 were used in, not all of DOD but most of DOD from 1971 through 1999, and late in 1999 all of the remaining stocks of vaccine were expended. Since late 1999, there have been a number of fairly sizeable outbreaks of adenovirus disease at training sites, and unfortunately there have been two deaths that are now pretty clearly attributed to adenovirus, both in Navy trainees at Great Lakes (next slide). I'm going to tell you just a little bit about each of those two deaths. The first was in a 21-year-old male who developed an acute respiratory illness and was seen three times as an out-patient. What happened after that was that he became lethargic, had ataxic gait and collapsed, was taken to the emergency room where he was unresponsive to deep pain. He had a number of generalized seizures, pupils were not behaving the way pupils are normally supposed to behave, and to simplify the long, involved hospital course, he deteriorated rapidly in the hospital and was comatose for a number of days and died on the ninth hospital day (next slide). At autopsy, the central nervous system had all the hallmark signs of viral encephalomyelitis. Respiratory findings included bronchiolitis obliterans organizing pneumonia with lymphocytic and plasma cell infiltrate and also was found acute and chronic tracheobronchitis, again with a lymphocytic infiltrate (next slide). Actually, before the young man died, high titer complement fixing antibodies to adenovirus were found, and after death the CDC found neutralizing antibodies to both adenovirus 4 and adenovirus 7. Adenovirus was found by PCR from the cell pellet, and also adenovirus in brain and lung with two different adenovirus primer sets (next slide). So our conclusion here was that the cause of death was encephalomyelitis from adenovirus but type 4, 7, we really hadn't been able to pin down a specific type (next slide).

The second death is a simpler presentation, but no less unfortunate. A 21-year-old male presented to the emergency room with pneumonia. He was admitted. He rapidly worsened, and essentially died of acute adult respiratory distress syndrome. There was a positive respiratory culture for Strep pneumo, but the chest x-rays looked for all the world like a viral pneumonia. Viral cultures and serology were negative. Adenovirus was searched for by PCR and initially not found, actually not found. This death occurred in September, and adenovirus was not found until a new commercially available PCR-EIA test. I'm not really familiar with the details of that test, but was used both at NHRC and at CDC, and it was positive for adenovirus, so we're considering this death also an adenovirus death (next slide).

CAPT Greg Gray at the Naval Health Research Center has had a very extensive respiratory illness surveillance program in recruit, in training centers going on for several years, and it specifically looks for adenovirus also, and I'll just show you a couple, quickly, a couple of graphs of data that he's found. This is at all Army installations (next slide). Navy and Coast Guard installations and next slide gets a little more interesting because this is just adenovirus infection across nine different sites, and you can see that Great Lakes in the dark blue has kind of led the pack throughout the period of this data. It doesn't come up as recently as would be ideal, but certainly Great Lakes has had a lot of adenovirus illness (next slide). The lines here are respiratory illness and adenovirus illness, but the bars relate to the number of cases and you can see that we're talking about a lot of illness here. This one peak gets almost up to 2000 cases in a month, not at one location, this is across a number of DOD training locations, but if you sum up all of the green bars, we've had a

tremendous amount of adenovirus illness (next slide). And this, a different way of looking at the data pretty much corroborates the same thing. Of all of the viral, of all of the respiratory cultures, close to around it looks like 60 percent are positive for adenovirus, and that's 60 percent of the ones that grew something, that's 60 percent of all the cultures, including the ones that were negative (next slide).

Just a little bit about the adenovirus reacquisition effort. There is a working group at the Army Medical Materiel Development Agency that's been in existence for I guess getting close to two years now. This same week there's a meeting of that group to finalize a request for proposals to the industry. You probably all heard about the paltry sum of \$14 million that's been available up to this time. It had been hoped that the \$14 million might get through an initial partial stage of the reacquisition process, which might develop an IND, might be sufficient for a company to develop an IND product, but we've all known for quite some time that \$14 million was really not going to put a significant dent in what, the ultimate costs for this project, but an additional \$27 million has been asked, has been requested as an un-funded requirement. Still, that's looking good, I mean that's better, that DOD is beginning to recognize the need to put a significant amount of resources into this effort, but even if things go as well as they could possibly go, we're looking at, at least three years before we would have vaccines available again to administer to trainees. And that's probably the last slide, so if there are any questions. Sir.

**Dr. Campbell:** I'm not that familiar with the adenovirus vaccine. Can you tell me the efficacy of it? Actually, a couple of questions. There's a lot of adenovirus infections. Do you have data of unvaccinated people and what their rates

are at different facilities? And number three, why was this vaccine allowed to not be used?

**CAPT Yund:** Well, maybe before you spend a lot of time on the first two questions I won't be able to, I won't have time to get to the third question. It's a long sad story.

**Dr. Sokas:** It's a terrible story, and the board's been involved for at least five years.

**Dr. LaForce:** As a follow up for the board, you remember at the last meeting the board asked that I meet with the surgeons general, and I've met with the surgeons general of the Army and the Navy to discuss this issue, and to also and with you, the IOM letter, maybe the Institute of Medicine put out and, and this is very unusual for the IOM committee to do this. They didn't even wait for a final report. They had what's called an interim letter sent out and really it got into the general knowledge. It appears as though the surgeons general in question that we chatted with, and again thank you to both the men and to Jeff for having set those meetings up, that there is great concern on their part, and at the last session, there appears as though, there is more than an amber light, it looked more greenish, in terms of the second tranch of funding for that particular antiGEN So, as again informational feedback, I think that things are moving in the right direction. You cannot, cannot minimize this though as being sort of really, you can't think of nice things to say in terms of even two deaths. Remember we predicted that. Said it's the tyranny of the bell shaped curve. You get out to the right, beyond the right hand side, and you never know as a clinician what is actually going to happen, and it has happened.

**CDR Ludwig:** I just want to add to that, one quick comment is that we've just begun to see what's going to happen in the post-vaccine era, and these rates that we're considering epidemic are pretty much equal to what was the background in the pre-vaccine era. That was the background rate of adenovirus, not epidemic. So, we could just be seeing the very tip of what could happen.

**Dr. Ostroff:** I mean my recollection from previous board discussions was that this was considered by line Command to be basically a medical nuisance. I mean, what's been the response to this? Are they now sort of taking this more seriously?

**CAPT Yund:** I think that the general tone across DOD is one of increasing concern. It's been to a degree forced by recognizing that we've had deaths and outbreaks, and more and more people speaking up, and with the help of Dr. LaForce and the board and other organizations, the Institute of Medicine, I think it's going to come to pass that we will reacquire vaccines. It's, I mean I won't hazard a guess about what's going to happen in the at least three years between now and when we get vaccines back, but certainly if two deaths a year is a point estimate—we could have fewer than that, we could have more than that—we could have a lot more unfortunate developments between now and when the vaccines return. But I think that the momentum and the realization that this is not just a cold, that adenovirus infections kill people, and even short of killing people, the mass of morbidity in our training units has a huge effect on our ability to train recruits. All of those things are better appreciated now than they have been in the past, and even, well for example the CINCPAC fleet surgeon out in the operational forces, there's concern, and I think

it's legitimate concern, that we may have adenovirus outbreaks at sea, I mean from the Navy standpoint, as we, as a larger and larger percentage of our population in the active duty Navy has not ever had an adenovirus vaccine, we're going to have a naïve population, and I'm going to be surprised if we didn't have adenovirus outbreaks at sea. Yes, ma'am. t

**Dr. Sokas:** Yeah, this is just getting back again to the process. I mean we all sat through and watched this happen, said this is going to happen, and I think it's wonderful that you have had the impact with meeting two of the surgeon generals right now, and I'm just wondering if there's a step above that that you may need to do afterwards. It's just a thought.

**Dr. LaForce:** Yes, we have gone the next step, to the next level, which is I believe the assistant secretary, Ben, help me out, for health affairs, because that was where the letters have all been sent, but the issue is that if there's not conviction at that next lower level to actually push it up, then not much is going to happen. Ok, let's move on. Ken. CAPT Schor from the Marines.

**CAPT Schor:** I'm going to sing karaoke here. So much for snow here. Well, that's me. Let's go ahead to the next one, please. I'm going to talk about two basic, main themes. One is that some lessons learned from some trips that I was funded by AVIP to take with a group of about six or seven, up to ten folks to all three MEFs, and I focused on the execution pieces. I focused on the distribution side of the vaccine, and the immunization tracking system, and then I was able to broaden this across all immunization, so there's some general lessons learned (next please). This is what it came down to, the key thing on the logistics side, and that is the

terminal cold chain. We do a great job of getting the vaccines down to hospitals, to the prev-med refers at the hospitals. We may not have paid a lot of attention to when those hospitals give the vaccine to the squadrons or the battalion docs, corpsmen, whatever. We have a world-class system down to that point. We may not be emphasizing the key lessons learned and the key things on how you should store that vaccine. The corpsmen comes in his or her Humvee or pick up truck, brings the six-pack cooler, throws a bunch of ice in because, well, we need to keep this cold, right, so I'm going to keep it colder. And that may not be, and certainly in the anthrax vaccine that is not good. So as MAJ Caouette says in his signature block, "ice is bad," that's a key theme that we took out there. Another thing is, is to look at how we work these fault lines, as I call them between BUMED or Claimancy 18, that's the funding stream, and the green side, the operating forces, the expeditionary environment. As we all know, I think in public health, those fault lines between entities are the key things you have to keep working on. And sometimes I think if we do an MOA between those entities to say who does what to whom, who is responsible, who is not responsible for different things, those are key things that we need to do. We can't assume that it's being done right, so paying attention to those key things is something that I've learned by going out and looking, right, showing me how you do this, and walking the walk and talking the talk at the same time (next please). Again on immunization tracking, we all know that the Secretary of Defense with the anthrax program said you'll keep, you know, a DEERS repository of all shots, well I've gone out to the field to see how this works or doesn't work, and it's kind of interesting. As we get more Windows based, the corpsmen like it better.



They're doing a great job. They're spending hours and hours jamming data into their individual programs at the unit level, sometimes two and three times they're putting the same data in. The problem is, they don't trust the system. It's a sociological program, it's an education problem, it's a behavioral problem. So I'm getting everybody in the board eventually here. We have to get out there and hold them by the hand and say it's ok to push that send button, because if you don't send it to DEERS, and oh, by the way, if you don't bring it back into your desktop which is the way our system works, so that what you have in your desktop is what DEERS has in Monterrey, California, that's the key thing, and you have to keep pushing that issue. And you have to bring the people that know how the system works, that work the system and say it's ok. And you have to go over to the aid stations and say, you're going to do, and I'm going to watch you, and it's not going to kill your system. So it's all these crazy education things: initial education, continuing education, visiting there and making it better continuously (next please).

Now to switch gears. As many of us know here, injury prevention is getting more and more visibility in DOD, and the safety centers have done a fantastic job. In the piece of the pyramid way up at the top, it says, has it cost a lot or killed somebody? What about all that disability? What about all the morbidity that we're causing, who's tracking that? Well the safety centers say, well we're not, because we're not getting paid to do that. Well those of us in different areas of preventive medicine saying maybe we need to find ways to do that. So one of the questions that came up through the three stars in the Marine Corps at the Executive Safety Board level, under the assistant commandant of the Marine Corps says, how many Marines

are we losing to disability, to physical evaluation boards. And the head of Marine Corps safety kindly said, well I think we're losing sort of lose-work 2000, I think, but I don't know anything more about it, sir, tap dance, tap dance, tap dance. This is a colonel in front of three star lieutenant generals. So I've been able to co-opt a prev-med resident at USUHS, Fred Landrow, and he's actually looked at that data. We went into the personnel databases. We had 12 months worth of data, we have rates. And some of the preliminary things are startling. Looking at E6s in the Marine Corps. The rate ratio of female to male, is 3. There are three times more female Marines at E6s, that are E6s, that are getting separated for musculoskeletal physical evaluation boards than their male counterparts. I won't go into, the officers it's even more startling, it's maybe 18 to 1. Now we don't know why that is, and that's a 12-month snapshot of time, but we need to see if it's stable over time. We need to look at this data in another 12-month segment. And, unfortunately, there's not a whole lot of folks who can do that. You know I'm the one-of at Headquarters Marine Corps. There's three other prev-med officers. They're busy at the operating force level. So we're being asked, the assistant commandant is saying, I want to know more. I'm going to give you some money. And as you may realize the Marine Corps money, we don't have a whole lot of money there, so we're happy to beg off of folks, so Fred is going to come down in February, and he's going to put out a plan of action to see how we can better investigate this and get more data to the leaders. As many of you know, we don't get very far in the Marine Corps if the leaders don't buy into it. We're going to try to give them the data, and anybody here that's interested in helping or have residents or other PhD or masters folks that want to

help, that maybe we can give you some money to help, please talk to me (next please).

Here's some other things. Here's the Semper Fit program. That's manpower. That's Marine Corps community services. Down at Camp Le Jeune we have some PhD-trained health and fitness folks. They said, if we break a Marine and we have to rehabilitate them, the rehab folks at the hospitals only take them up to 60 or 70 percent full up rounds. How do we get them up to 100 percent to the NCAA level 1 athletes that we try to treat them as, and they should be. So they're trying to bridge that gap between 60 or 70 percent rehabilitation up to 100 percent. Well, that's not medical money, that's line money. How do we integrate a system at a Marine Corps base that looks at different funding streams and is sort of doing some clinical stuff, but it's being funded out of non-medical dollars, how do we put that all together and do the handshakes and make it work together with that resource provider, this commanding officer of the hospital at Camp Le Jeune? We're just starting to look at those bridges and how to work that (next please). I've mentioned some of this before, but this is really in primary prevention. Body armor works great against penetrating trauma. It may not work so great against the blunt force injury behind the plate, and the Department of Justice has the standard, and it may be a pretty crazy standard—it's like a clay model that has a breast plate over it, and how do you measure it? AFIP is looking at doing cadaver research to bring this into the 21<sup>st</sup> century. So how do we prevent those blunt force injuries, and what are those injuries, and how does that impact how we provide care at the pointy end of the spear? The next thing is, and I mentioned this in May, thermobaric weapons, these

crazy things that Russia is exporting and developing more and more of, that are bazooka fires. And there are some kind of, I've seen some lectures by some explosives experts who have no idea why these things are so effective, but you shoot them in a window and for a couple of floors above and below in a high-rise building in an urban warfare scenario you kill people. And it's kind of nice, because you kill them and you don't wipe out their computers, and you don't make it really bloody there, so you just shoot this thing in, and it kills a bunch of people four floors above and below, and you just go in and throw them out the window and just use their facilities. Pretty cool. Now the Chechens did this really well to get APCs, armored personnel carriers. The armored personnel carriers still work, the Russians are dead, throw them out the APC, go drive off and kill Russians. Pretty good for a terrorist. We don't know how those things work. We don't know how they cause the patterns of injuries that they do. We're just getting data on that. So that's some real primary injury prevention that we're doing and looking at some new threats. And with that, that's the end of my brief.

**Dr. LaForce:** Questions for the captain?

**CAPT Schor:** Sir.

**Dr. Shanahan:** Do you have any career armor standards? I've worked on a project that was brought out over 10 or 15 years ago. There was a proposal for some standards for putting padding behind body armor, and I guess nothing was ever implemented, is that right?

**CAPT Schor:** You know I think the issue here is, some of the disconnects between the people that know the fabrics and the biomedical researchers and getting

the two to talk so they can understand each other—that's a big thing. I'm not absolutely certain about those standards, but I don't think much has changed, and I think there's some real concern about the blunt force injuries behind those pads yet.

**Dr. Shanahan:** Well, you don't have anything back there of any significance, particularly with the garden variety.

**CAPT Schor:** Yes.

**COL Bradshaw:** Yeah, I'd just like to piggy-back on one of the lessons learned that Ken brought up earlier with another anecdote. After losing about 230,000 doses of vaccine early this year due to cold chain problems, in going out with the message through logistics and telling everybody about problems with cold, when we finally got our vaccine at the Air Force Surgeon General's office at Boeing Air Force Base on 17 January, I fortunately was first in line, but the chief of our clinical operations side of the house, when he got in line a couple of hours later to get his shot, they tried to inject the vaccine, and could not inject it because it was frozen. It had been stored on ice. So it is a problem with the trickle down getting down to the folks at the level of service.

**Dr. LaForce:** But I can't impress, I was talking to Ben about this, and I really was very impressed in terms of your taking it all the way down to that level, because part of the work we've done in the past for this program of immunization, in terms of developing immunization programs globally. The care of vaccines at the lowest level is the least monitored, and it is the most problematic, that's why you have these vaccine vial markers that are temperature sensitive, etc. that really should have taken, but when you get down to that level, most, a fair amount of DPT vaccine

is no good, because it's gotten frozen on ice and it precipitates, and it is not antigenically the same vaccine, so it would be nice if quote, unquote, lesson learned got back to the other services, that it really might be worthwhile to spend a little bit of attention in terms of what is exactly happening at the lowest level because I think everybody is going to be, as you were, Ken, surprised.

**CAPT Schor:** I would challenge anybody to go to your refers and your clinics, even in the fanciest refers, we still have ice blocks that go out there, kitchen refrigerators that are not monitored 24 hours a day that are not alarmed. So it's just amazing as the vaccine triples in price or is more precious, it's a big deal.

**Dr. LaForce:** Ok, thank you. Let's move on. MAJ Balough, joint staff, medical ready.

**MAJ Balough:** Medical readiness, sir. Thank you for allowing me to come. Admiral Myoh wishes he could be here. I'm glad he's not here, because that means I get to be here. Then on the flipside of that, since apparently somebody thinks I'm their enemy and COL Riddle thinks I've got way too many slides, and I'm in trouble because my wife isn't sure why I'm here and I got to buy a whole bunch of stuff before I get home, we're going to go through this fast. Somehow I get wrangled into buying trinkets for the Brownie troop, I don't know how I did that. But anyways, this is the only slide I've got. I'm going to address the Mad Cow issue, which isn't up here right now, but I'll go ahead and talk about it. What happened on that issue is that CINCOM went out and they had their vets, doing exactly what they were supposed to be doing, checking where everybody was getting their beef and their meat, and what they noticed is, they have this thing called service-in-kind where we

will as US people will do something for Country X and Country X will do something for us, well one of the situations was another country was going to be providing meat. They couldn't determine where it came from, so they questioned whether we were actually procuring any beef from European origin beef. So they were drafting up a message to go out within their components that says, hey this is the policy, don't do that, and they said, wait a second, we can't make policy so they came to the joint staff there, their DCINC, who I think is a four-star or a three-star, called the DJS, the director for the joint staff, which is a three-star, so that's the level this was at. This was at the three-star level. The DJS talked to LTG McDuffy who is the J4 three-star. He called us in. We said, well, we'll look into it. We went around, we talked to the other CINCs, we talked to the services, came back and said, well, the policy's out there, but we're not sure everybody is aware of it. So, what we simply did was reiterated what the policy was, did a message, staffed that through the CINCs and the services and sent that out. We didn't do it because of any increase, rise in Mad Cow Disease in Europe or anything like that. Now I know that Dr. or COL I think it's Fitzpatrick, who is in charge of the armed services blood program, he said that if the Red Cross goes ahead and institutes the policy if you have been in Europe for six months or more, then I think it was within the past 10 years, then you couldn't donate blood, that's going to cut our blood supply by 50 percent. But he's not sure if they're going to do it. He says he thinks they're going to do it, but that's all I know at this point on that issue, so that'll help. Just to reiterate some other things.

On the DU issue, I'm not going to go over what everybody said, but just to throw around some other things. Admiral Mayo got invited to attend a COMEDS meeting. They had all these surgeon generals from all the NATO organizations, came there, they discussed the problem. The key outcomes from that is that they said that there is no link between DU and leukemia, but they, what was nice, is that they said, there is a problem here. We don't know what it is, but there is a problem, so countries, go back, look at your information. They're developing a website right now that they're going to try to share all the information, so the Italians got everything we have, and we can get what they have, and all that. And then they're also going to go back and look at, do some epidemiology studies, look at the soldiers, sailors, airmen and the marines that were deployed to Kosovo and Bosnia. What are their incidence rates compared to what the country sees as normal. Now, we did go back and we asked the DMSS system to look at, hey how many cases of leukemia did US troops have in Bosnia and Kosovo, and after explaining to them that we understand that there's no link, but we've got to deal with the media, there weren't any in Kosovo, and there were four cases in Bosnia, but that ratio, incident rate I think was half what the normal US rate is, so we were able to use that data. And I'll just start and go up from the bottom. The anthrax protoCOL What that is, right now we're staffing that USAMRID and MRMC developed the protoCOL They went to health affairs and they're working with Dr. Cirrone. I've got a copy of his 96 pages. At this point, we're staffing that with the services and the CINCs to get their feedback on that and what that is for post exposure use of the vaccine, where if you get exposed and you haven't had your shots yet, we'll put you on antibiotics and



we'll start giving you the shots. And we're trying to meet all the requirements for all the INDs. If anybody's interested, I have got paper copies for that you can look at.

The last thing is the joint staff memo, December '98. What that is, is that identifies the disease surveillance pieces that everybody has to do while they're deployed. It talks about pre deployment, defines a deployment as 30 days or more, joint staff supported or CINC supported. You've got to do these questionnaires pre deployment, post deployment. If you answer yes, you got to go see a physician. We're going to go ahead and update that. The bulk of it is going to stay exactly the same, but what they're going to add into is the environmental and occupational health piece of that. So it's going to, they're going to add some more enclosures to it. And they're going to change where to send in the forms. Right now they're going to go to DMSS. What was the last thing? Oh, the combat stress is what we're going to try and change, some of their definitions, because apparently ones that we were using weren't very clear. And I'll try to make it short, because I'm still on Washington time, and it's dinnertime. Any questions?

**Question?:** Why are there IND issues in terms of using the anthrax vaccine post exposure?

**MAJ Balough:** My understanding the label is a pre exposure, so if we want to use it post exposure, it's not in accordance with the label.

**Comment:** That's right. It's not meant to be used for a post exposure vaccine.

**MAJ Balough:** And another piece that they're adding, because we have a limited supply, is the possibility of using the non-FDA approved, but that's like the

last resort, but when you look at that situation and these people have been exposed, and we've got to do something on what have they got?

**Dr. LaForce:** Ok, let's move on. CDR Ludwig, Coast Guard.

**CDR Ludwig:** I'm going to do a little karaoke myself. I'm happy to be back and especially happy to back now it's in Hawaii. I do know the date today is not the 12<sup>th</sup> in case you noticed that. Know what was in my mind when I put that on there, but let's advance to the next slide. Probably, one of the most significant things that's happened in the Coast Guard as far as preventive medicine goes is that our one and only preventive medicine officer, which is myself, was reassigned temporarily as the chief of health care systems division. This is potentially four or five month kind of situation, which is not a big deal in some ways, but there's no replacement for me. There is a very capable, CDR Tedesco, as many of you, who is in charge of medical readiness and in that we do overlap on a number of items. He does not have time, however, to take over all the issues that I've been working on, so whatever I do in preventive medicine in the next few months is sort of what I can squeeze in on the side. I can't let it go, because I'm preventive medicine officer, so (next slide please).

We do have what we've been calling febrile respiratory illness surveillance at the training center at Cape May. We call it FRI surveillance because the Naval research labs that are doing our testing for it call it FRI, and it's ongoing. We've had pretty good continuing vigilance. After the last time I reported there was a drop in the vigilance, I think that has, it's partly due to again a lack of some staff, but let's go to the next slide. I have been talking to them on a regular basis. Even still in my new job I continue to send out the weekly reports from their surveillance efforts, and

you'll notice that in right before Christmas we had a pretty substantial outbreak with almost two and a half cases per 100 trainees that one week. We don't have lab results available for those yet, however we've had a majority of our FRI turn out to be due to adenovirus, so I don't have any reason to suspect that that's anything else than mostly adenovirus. You will also notice though that it came down very low after Christmas, and has continued to be probably our lowest rates ever. I questioned them as to their continued vigilance as I call it, and we are pretty well convinced that this is their real level right now, which we're very happy to report (next slide please). They do report having instituted some of these sort of standard, common sense preventive measures. I've just found out about this, so I haven't had a chance to follow up exactly how they instituted them or if they're doing anything to look, well just any of the aspects of them. Hand washing, I assume that means increased availability to hand washing facilities. Head-to-toe sleeping, I think they're trying to enforce that, and airing out the squad bays. I have asked them also to see if they can estimate how many square feet per trainee they have, as I suspect it's way below the service requirement, I think it's 72 square feet per trainee. I don't know what airing out the squad bays means; I'll find out about that. But we also, they have of course been immunized by now (next slide please).

The only other thing I wanted to touch on was the vaccination program. We do, as all of DOD has, we also have been affected by the slow down, of course. We're really part of the DOD program. However, our program has had a bit of a step up in a sense because of an increased Coast Guard presence in southwest Asia. This has been brought about by the USS Cole incident, where we are now sending

port security units and law enforcement detachments. Actually, we have been sending them over there, but there's an increased number of them there to help with, again, port security. Makes sense. Sometime I'd like to talk to the board about what our role is there, but I won't focus on that now. We do have a new automated tracking system for just right now just for anthrax vaccine. It is a stop-gap measure, really until CHCSII comes aboard, and that's really all that I wanted to talk about Coast Guard preventive medicine. Are there any questions?

**Dr. LaForce:** No, not a question, but from your standpoint to express really concern. Because if you're assigned for a six month period of time, frankly from my standpoint that doesn't make very much sense in terms of preventive medicine issues in the Coast Guard, particularly in light of the post-Cole disaster, if you're reassigning individuals to southwest Asia, this is the time when you really need more expertise, not less expertise in terms of preventive medicine.

**CDR Ludwig:** My personal beliefs go along those same lines, and there are several issues that are right at a head right now, however I don't say this to make the Coast Guard look bad, and I hope that is not the impression you take away. The Coast Guard is small, and we don't have any duplication however I think in regard to what you have just said, I do want to try to arrange a meeting with you and our equivalent of the surgeon general to talk about the adenovirus issues, as you have with the other surgeons general, and perhaps...

**Dr. LaForce:** Hopefully, something else. No, no I'd be more than happy to sort of follow up, and I'm sure the board shows equal concern over this as well.

**CDR Ludwig:** One of the things that CDR Tedesco and I talked about is that we possibly haven't done as good a job as we could have, and we hope to change that in convincing or demonstrating to the surgeon general and the deputy what it is we do and can do. They are very focused on research, in resource intensive and TRICARE issues, and that is what I'm working right now, is TRICARE issues. We cannot leave that alone either, and we need to have some more people. I was going to say one more thing, and I forget what it is. It doesn't matter we can talk about it later.

**Dr. Patrick:** Is it a lack of a satisfactory person that could actually do this position or is this a decision just not to fill the position?

**CDR Ludwig:** No, no. They're just not looking to hire a new person.

**Dr. Patrick:** Is there a shortage of good people available?

**CDR Ludwig:** We could probably discuss that later.

**Dr. LaForce:** Let's move on. We'll close with COL Warde. If I'm not mistaken this may be your last presentation.

**COL Warde:** I might attend the one more meeting.

**Dr. LaForce:** Whew, good, because I...

**COL Warde:** I'm not quite sure, but thank you for that, thank you for that sir. It was my intention to keep a promise, and I'll do that very briefly. I made a promise at the previous board meeting to offer information on the malaria cases that arose in the deployment of British forces to Sierra Leone last May, and I had not intended to summarize the report, and I won't do so, but I have brought with me on floppy disk copies of the report that was written as a result of the outbreak of malaria

last year. Just to give a couple of sentences context for those who were not familiar with this: British nationals were evacuated from Sierra Leone last May in a rapidly escalating civil war situation and approximately 1000 British personnel remained in country for six weeks when a United Nations mandate was not fully resourced. It was filling a gap, really, in Sierra Leone, and within about two weeks of the initial deployment, cases of malaria were being reported, and a total of 91 have been identified as a result of that operation. Of course, many boards of inquiry followed because of suggestions that this represented a wholesale failure to implement precautions against malaria, but the report which I'm offering to members of the board who are interested is by the consultant in communicable disease control and relates, really describes lessons learned from a situation in which troops are deployed, in some cases with less than 24 hours notice to the area where malaria transmission is the highest in the world, in an operational, rather than a training situation, where there was a real hostile environment, and I think that this report puts into context the realities of what happens in those circumstances. And I won't attempt to summarize it, because I know that time is very short, but I would invite you all to study the report and maybe if questions arise after that, they could be directed to me, either between now and the next meeting or perhaps at the next meeting, and I will do my best to answer them. But I think rather than going into a detailed description of that report, I'll stop there.

**Dr. LaForce:** Is it possible to be able to get from the floppy disk so that these hard copies that can be distributed?

**COL Warde:** I didn't bring, the report is 13 pages plus six annexes, and I didn't bring 40 copies of that, but I have got 30 floppy disks.

**Audience:** Oh, oh.

**Dr. Ostroff:** Just one quick comment about what they were doing for prophylaxis and most of the malaria there is still on the sensitive side.

**COL Warde:** It is. Mefloquine was the first choice of, it's falciparum malaria was the concern. Mefloquine was the primary prophylaxis, and, but the point is that many people left the UK for this deployment without having started their prophylaxis, because the decision was taken to go within 24 hours.

**Dr. Ostroff:** I would ask another unrelated question just because the issue came up in the other presentation. Where does the British military get their blood from?

**COL Warde:** We do not any longer have a specific military blood procurement system. We are totally integrated with the National Health Service in the UK.

**Dr. Ostroff:** Where do they get their blood from?

**COL Warde:** From blood drives from the general population.

**Dr. LaForce:** You know the question then comes up is the under the new sort of quote, unquote rules or suggestions most of the donors are going to evaporate, are they not?

**COL Warde:** These are not international proposals. I think you're talking about the US proposals. I am delighted to be able to report that you are not interested in my blood.

**Dr. LaForce:** With that we part. Yes, Dana?

**COL Bradshaw:** My understanding is that the reason for this is, of course it's theoretical in the first place, but that some people have talked about taking the white cells out since there is this you know CNS thing that you do white cell three blood that it would be at lower risk.

**Dr. LaForce:** Ok, so let's, again I'm just sort of blown away with the extent of activity as we go through the preventive medicine officer reports. Let's break for lunch. Ben's got some comments for us, and what I am going to propose to MAJ Trent's follow up is to have it down at 1:15, and not 1:05. Where's MAJ Trent? Is that ok? 15 minutes is ok?

**COL Diniega:** Ok, we have 15 minutes for lunch. If you have a ticket, that's basically off islanders...

*LUNCH BREAK*

{Transcription: Tape 4}

**COL Withers:** MAJ Trent, you're on.

### **THEATER EPIDEMIOLOGY MODULE DEMONSTRATION**

**MAJ Trent:** Ok, welcome back to everybody. I hope I can give you a break after lunch here a little bit.

**COL Withers:** You're not on yet, MAJ Trent. Put your mouth real close to that. Testing. Testing. There you go.

**MAJ Trent:** What I'm going to do is just a quick review of the Theater Epi-Module. I could spend probably half an hour or more on the Patient Encounter Module, but for this group I'll work, I'd work my way through the Epi-Module.



This is the opening screen, and as I alluded to during the briefing itself, the main component of it is something called the watch board. This is command and control of every type, of every epidemiology type data. You can. This, as I said, these are customized per AOR. This map is simply a bit map and just to show you. This is what we've been playing with at Pacific Warrior and we pulled this bit map off of Map Quest, is pulled into the system, and whoever is setting up the TEM for that particular location, these dots represent a location or a treatment facility, and they go back to the southwest Asia, because I've got a little bit better data on that. As you can see up here, you set your location for each location. Each facility may have several intake clinics associated with it. For instance at our ATH in Pensonton Air Base, there's acute care, there's a coalition clinic and there's a flight medicine clinic. So you can look at each of these levels of care. Let me get a little better query for you here. For whatever it is you are monitoring on, you can look at each level, whether it be the very small flight medicine clinic data or the acute care, and then you can take it up an additional level, and look at it for that entire facility. You notice the colors change as I move between the different levels of care. That is because for acute, over here where you see set alarms, that is set on counts currently. We don't yet do rates in the system, and I have not reset for the entire Pensonton area those counts to represent what the aggregate data would represent.

**Dr. LaForce:** Do you have alarms for work-injured that's set into your program already?

**MAJ Trent:** Actually what I'll do is over here on set surveillance is how we would set up these queries for each location, and let me find work injury. Over here

in the middle you will see the criteria for that particular query. We left the last 24 hours; you can set this to whatever you want. For play purposes we just leave it at 24. Set on alarm levels, and eventually again those will be rates. The type of visits. Again in this case we only want initial admissions so that we can get an incidence versus prevalence, right. We want to keep the follow-ups out of there, although if you want to build a different query and look at follow-ups, you can do that as well. And then, DMBI categories is what we're pulling those work injuries from, and again the DMBI categories are created behind the scenes according to the diagnosis that is selected by the provider.

**Dr. LaForce:** Ok. How much time does it take to enter the data through each encounter? If I come in with a sprained ankle, how long does it take the corpsman or somebody to enter this?

**MAJ Trent:** Once you have gotten used to the system, it can take a couple minutes.

**Dr. LaForce:** How about if I don't know, and I'm not happy with it?

**MAJ Trent:** It will take you a little bit longer.

**Dr. Sokas:** If they want to take back a hard copy, does it offer that?

**MAJ Trent:** It does. And in the Theater Epi Module I can't print that out for you, but if we were in the Patient Encounter Module it would print out your 600 for you with all the information you have just documented through the selection of each of those pre-clips, and it looks just like an SF600. Even though you're picking from a pick list, for anything you put in there, you have the capability of, in a separate field, writing a note to reflect your provider comments.

**Dr. LaForce:** Ok, may I come back to that again, MAJ Trent? You have studied this in the field, and this takes two minutes?

**MAJ Trent:** For an ankle sprain, it does. And I'll explain why. We have built templates for certain kinds of injuries. And ankle sprain happens to be one of those. Those templates for an ankle sprain, it's only musculoskeletal types, and it includes musculoskeletal types diagnoses, physical findings, and so those are much smaller. But if you're going in for something that doesn't have a template—the templates are set by the user, you can build them any way you want to—then it takes you a little longer to know where in the pick list it is, but once you've learned where in the pick list something is, you can go right to it.

**Dr. LaForce:** How long would it take for abdominal pain?

**MAJ Trent:** It depends on how many symptoms and physical requirements you have. Yeah, it would take, now again remember if you're using this as your data input device and using it the way it's designed, that's time you're not writing this stuff down by hand.

**Dr. LaForce:** Correct. Now again I keep coming back, because no matter how brilliantly it's set up, if it's not useable at that level, it won't be used.

**MAJ Trent:** Agreed. That's why we try to make the product of inputting the data, something the provider saves time on, at the terminal. A return on their investment if you will.

**Question:** The precursor of this is was Desert Care 1 and 2, and the second one was built in Oceanic Notes, but one of the criticisms the providers had, was that it was all template driven and it was very rigid, and this is supposed to have a little

bit more flexibility and be more useful. And it really did drive providers batty, and in fact that was also underneath our first rendition of CHCSII and now we're going through a whole different one now, because you know you needed more flexibility. But you have to have some balance between being able to get data that's not just free text entry and that you have some way to categorizing it, so you can get, you know, this kind of data manipulation, so there's got to be some kind of balance there.

**Question:** Don, did you use Desert Care II when you were over there?

**LTC Thompson:** Actually, what's more in Saudi Arabia about four years ago we designed the precursor to Desert Care, the EID program, and tried, it was the simplest version where it took about 30 seconds to a minute to enter the information and the vital signs and the chief complaints, but then the only thing that came from the provider was the ICU 9 diagnosis from the physician, no symptoms or syndromes or findings of physical findings, nothing more sophisticated than that, and that's still worked the last four years because of the very level of impact. In my old office when I worked at our office we could collect the information from, the DMBI information from Sunday through Saturday and by Wednesday we could turn out reports saying get back to the field, you raised a question about that earlier. I briefed that to the AFEB about two years ago I think that was before most of you came on board and the desire to get more information has run head onto our provider active participation and data and this is a very good version, we'll see if it's the final version I suspect we're still going to be doing some cleaning up, but it looks like it is the best bet to make it work.

**MAJ Trent:** Again, this is a compromise between what the provider wants and what the epidemiologist needs, and it's a time trade off, I'll be the first to tell you that. We're just trying to make it as user friendly as we can. I have had some questions about denominator and rate calculations. We are not allowed to transmit over the internet in classified email system, denominator data or rate from which you can figure denominators because of troop strength and concerns, so what we have set up in this particular system is that whoever is at that level analyzing with the TEM, puts in, literally types in a number according to the population. As you can see here, we do break it out by what category they fall into so that if we do have an outbreak, we can separate out what kind of population it's in. And this is how the rates are going to be figured. Eventually over here on the surveillance piece of it, you will be able to select either from rates or from counts, depending on what it is you want to look at, and so this is where the rates will come in to figure. And this is, you guys were talking while I pulled this up, but it's simply under defining your AOR and defining your treatment locations; it's part of the initial, the initial set up for the TEM. As I had alluded to before, these are based on different ones. Now this one right here, DX, is diagnosis based. It's pulled purely from a diagnosis category.

Ok, and then we have symptom types. And actually, where's my upper respiratory? That's probably a good one to demonstrate to you like we're doing. These can be as narrow as the influence or the definition that I described to you before, which is strictly the WHM definition, or they can be much broader, because a number of people talked about adenovirus and influenza and how do we watch those rates, and in the field we're not likely to have the diagnostic capability or at least not

a real fast turn around on those cases, so what we have done is build a filter where anyone to be counted in these surveillance criteria are to be mapped out in a graph, have to meet these criteria. Again, initial admissions we get incidence, and then two of the five symptoms. If they met two of five symptoms of what providers put into the system, then they will be counted. And then what happens is if you do have a peak, then the person responsible for investigating that “outbreak”, will drill down into the data, look at those cases and verify whether it’s real or it’s not, and then you can add your good old shoe leather a little bit, but what it is, is it’s an artificial intelligence replacing what I call bright provider syndrome, where somebody in the clinic or the ER goes “I sure have seen a lot of X, lately,” and that is really what we’re trying to get at with the syndromic surveillance is pushing the point of intervention on epidemic curve further to the left so we lose less troops in the field. We can also pull things from this position. Well we do have hospitalizations. We can look at civilian patients, how many are, these can also be used for command and control beyond epidemiology. Right now the primary ones are using it are public health officers, but it can be command and control, counting the cases, but again it gets back to, if the administrator is watching the administrative type things like hospitalizations, then your data’s going to be better, because he’s going to want to know why it doesn’t match. Again, giving them a product, a tool they can use in order to capture the data.

The alarms on each of these can be reset according to what you need to do. For instance, this is a, we can change the number of days we look at; we can change the number of cases or the rate, and then we can do it for each level: AOR, treatment,

or the data source. The idea is to give the person in the field a basic tool that doesn't take a lot of epidemiology expertise, knowledge is a lot of, to being able to manipulate data, a first tool to recognize when something's going on. It is not meant to replace detailed epidemic investigations. We do import and export visits. We can archive patients if the database gets too big. We archive them; they never leave the database, but they're archived. And then we can export, somebody was asking about the Medi-Vac, we can export just an individual, and this is the screen where we do that, just individual level data, download to a pick, and just whatever drive the pick happens to be in, and send it on with the patient or email it on wherever it needs to go. Those are the basic components of the Theater Epi Module. There's a lot more little nuances it can do. These reports up here are the same thing you can out of PEM, and for those of you who are familiar with it, triple nickel is often used, that's our ER log, and a number of different ones. This is the DMBI summary that they have developed and in Pensonton, based on what they need to look at for their population. And these reports can be customized to your location, as well. And you can run it on a provider, on a treatment area, on a clinic, on an AOR, whatever level you need to look at. And, I'm not getting anything, I think because it didn't reset. My data is actually from July of last year, July and August of last year that I'm playing with, and I didn't reset it up here. Any questions on the TEM?

**Dr. Ostroff:** I'm just curious after several years of experience what you learned about a system like this in terms of what it can tell you and how often did you detect outbreaks that the folks out in the field didn't know about through saying gee, I'm seeing a lot of so-and-so?

**MAJ Trent:** I can think of some instances. For this one, it's not quite out in the field. The only place it is in Pensonton that we put in last summer, and they picked up a couple of respiratory outbreaks, and that's about all, but it's predecessor, the Desert Care 2 system they were just discussing, it did pick up a GI outbreak, and when the alarms went off in the system, they did have a RAPID in place, and they immediately went into a freeborn illness type investigation, because that's what it looked like, and they were able to run both food, patient, and food handler samples on site and confirm it was a salmonella outbreak, so that case it did push that point of intervention to the left. They probably would have picked it up, because it's only, almost everybody in that area comes in through the same location, and they probably would have picked up that something was going on in the traditional manner. It's when you get to a theater level and you get a little bit of each individual location that they need to have, when you get a spike at the theater level that didn't necessary spike at and the individual treatment location is where it really becomes pertinent, especially when you've got theaters like in southwest Asia where a lot of their food sources went from one food warehouse to many different locations, many different sites within the theater, tremendous risk there.

**Dr. LaForce:** Well, we should probably move on. I would ask the, you're currently in the process of field testing this, right?

**MAJ Trent:** Right.

**Dr. LaForce:** Ok. Why don't we see you again in perhaps six months so we can get some sort of follow-up in terms of whether this, this sounds like a very intriguing idea, but as a skeptic I would go back to Steve's point that how does this



replace the sort of street smarts of somebody who says, geez, I'm seeing a lot of diarrhea and I'm going to call the public health officer, or whomever, and then it gets worked up and then it gets taken care of, versus something like this? In other words, is the juice worth the squeeze in terms of having this? Does it provide early enough notification so that you really do save time, money, etc., etc., etc.?

**MAJ Trent:** You can certainly see it, us again in six months. Like I say, we're going to put it in southwest Asia this summer. I don't know when the next AFEB is. Unfortunately, in that theater of operations there isn't all that much that goes on, occasionally you get salmonella outbreak or...

**Dr. LaForce:** Then why are you putting it there?

**MAJ Trent:** Because you never know when you're going to be hit with something.

**Dr. LaForce:** All right, never mind. We'd like to, I think it would be appropriate to get some kind of follow-up in terms of this, either six months from now, or whatever, we'll do that.

**Comment:** We're actually going to put this in place in the Air Force Academy over the next month or so and its prototyping in the next few months out in the field this summer with 150, 250 visits per day, not bad, so we may have a better idea how long it takes to input, etc.

**Dr. LaForce:** Ok. Let's move on. Thank you very much, MAJ Trent. The first speaker for this afternoon on the issue of humanitarian assistance, will be LTC Hastings.

## CENTER OF EXCELLENCE BRIEF

**LTC Hastings:** I'm wondering where we plug into the computer. That's my question right now is which computer, that one? Oh perfect.

**Answer?:** You have a choice of three.

**LTC Hastings:** Oh are you my clicker?

**Answer?:** I am.

**LTC Hastings:** How perfect. I love having these O6 assistants. You know it's one of those things where I recognize so many of the faces in the audience, it's kind of like how many of you worked with the disaster center, the Center of Excellence in Disaster Management and Humanitarian Assistance before? You know there's several in the audience, and like CAPT Beecham, COL Wasserman, COL Schor that could probably, and certainly CAPT Yund, who could give this, this briefing, so that I'm honored to be with this very august body that I've worked with so many of you before. The Center of Excellence in Disaster Management and Humanitarian Assistance, I want to say just a couple of things about it first. First off, we did not name ourselves. I think I'd like you to understand that Congress gave us that name, when we look at Center of Excellence, so that you understand that that's the legal definition, looking at bringing together groups of people that don't normally work together. And we're looking at disaster management and humanitarian assistance, and we've been in (if I could have the first slide). We've been in existence since 1994, and we were put together because they looked at humanitarian disasters, consequence management, some of the issues that have come to the fore since Rwanda, and said: "you know what, the civil and military actors weren't

working together as well as they could—how can we make them more effective?”

So part of our mission is to look at complex emergencies, and try to bring together the players prior to that complex emergency, help them work together a little bit better (if I could have the next). And again in Rwanda we didn't do the best job we could have, and so they said, what are the things that we really need to be able to do? We need to be able to look at things in an operational manner, between the non-governmental organizations, such as CARE, OXFAM, Save the Children, the international agencies, UNICEF, UNHCR, as well as the military, and we needed to look at information sharing, and also look at how can we say that people have the training in order to go out there and work (next).

We broke ourselves down into these four different areas, and I'm going to concentrate on a couple of them, because I think they're what you're going to be most interested in. The education and training, and the collaborative research, and we also do information management, operational readiness that I'll talk about, but a couple of the items that we have with regards to education and training and the applied research probably are going to be the most interesting to you. Some of our partners, and there will be a pop quiz on this afterwards. The basic partners, the primary partners are: The Pacific Command Tripler Army Medical Center, which is where we're housed in the Pacific Regional Medical Command, and the University of Hawaii as well as the Centers for Disease Control. And other partners that we work with, the International Committee of the Red Cross, some non-governmental organizations, many of the military colleges, such as the Naval post-graduate school,

the Army war college where we do some peacekeeping training, and Commanding General Staff College, as well as several others (next).

Just a little bit about what brought us into existence. We are established legislatively, and in our language it actually talks about the things that we need to do, which is bringing together the civil/military actors, and then there are some other things that are thrown in there, looking at consequence management, basically we're putting together the different groups, also looking at tropical medicine, and just those different issues that would be seen in humanitarian endeavors (next). We have the three pillars, and we'll talk about those in just a moment, diagrammatically: peace operations, humanitarian assistance, and disaster management. And if you look at what supports us: research, some of the technical support programs that we have, and we'll talk about with regards to the research, publications of the different research programs that we have, and then the three pillars, and we try to bring those together, and that's the foundation for the center (next). If we have a peacekeeping operation, the military will be more involved, and all that is attended to that, bringing together the military and the civilian groups that will be working together, realizing that probably the military will have the greater role (next). In humanitarian support disaster management, probably the NGOs are going to be more involved and again bringing together the military portions of that, the things we're really good at, most of which is logistics, security, some of the coordination efforts (next).

Just to give you an idea of what some of our core tasks are, legislatively. We've broken them down, and again the most interesting for you will be the training and the applied research (next). Actually I guess, possibly the risk indicators, which

is what we're going to talk about also (next). Just some of the partners (next). And again the way that we're broken down (next). We looked at the crisis response cycle and said where can we make the intervention, so that's part of the way that we looked at bringing ourselves together to be more effective, and we said what are the training needs prior to going out there, how do we do the assessments (I like the way the 't' and the 's' fell off there, but that's ok), for early warning and building a response, and how do we pick up the lessons learned afterwards to be able to integrate those back into training again (next). Education and training: some of the work that we do is humanitarian assistance, disaster relief training, and you can see up there the acronyms that we have. We have the CHART, which is the combined humanitarian assistance response training. A large component of that talks about the things that you are worried about, water sanitation, rapid assessment, communicable diseases. HELP, which is the health emergencies in large populations, and we'll be running that this summer—this is just an advertisement. We're allowed by the International Committee of the Red Cross to put 15 military into that course, which is given over at the East West Center at the University of Hawaii. It's a three-week graduate level course, and if accepted into that the Center does cover the cost of tuition to the International Committee of the Red Cross. The Battlefield Care course, which we just got done with up at Schofield. Yesterday at about this time we were cutting out pig tracheas (they were already out of the animals). And then training systems program and then a certificate program I'll talk about with the University of Hawaii. Some of what we do is part six-theater engagement plan, bringing the

public health and the medical components to exercises as well as engaging in subject matter exchanges (next).

A little bit about the CHART. There's actually been quite a number of requests for this, many people want this training, and we've actually moved to a training the trainers concept, because we can't keep up with the requests. It's one week, it covers everything from the environmental crisis, on through transition and in-state, and then there's water and sanitation, pediatric issues, malnutrition, dehydration, rapid assessment and that sort of thing (next). Again the HELP course, which we just talked about (next). Battlefield care course, which is two days broken up into patient assessment as well as situation assessment, and just some of the different things that you might have to do in the austere environment. One of the parts of it are tricks of the trade, which is actually quite fun. What are all the things you can do with a safety pin? What are all the things you can do with a Foley catheter? How can you work in this austere environment? How can you use preventive medicine to stay, to stay healthy? And this is actually one that is integrated through medic and on through physician and works very well (next). Did you know that a Foley catheter can be a simple x-ray machine, by the way? Really, it can, I promise. That's one of the things that they've done there. I'll just tell you so you won't think I'm... Actually when you talk about all the things you can do with a safety pin, did you know that that can be an airway? Well the simple x-ray machine, actually your stethoscope can do the same job, but if you don't have your stethoscope, you can listen and by bone conduction, tapping on the knee, you could see if some of the long bones have fractures if you're trying to make triage decisions,

so it actually works pretty well, but we always hold that one to the back, because it makes people listen to the lecture, because they don't want to miss that. I just don't understand why myself, but that's seems to be one of the big hits. At the University of Hawaii we have put together a certificate course, which hopefully this spring will turn into a master's level if people are interested in becoming more educated with regards to disaster work and actually have a degree in that area (next). And again, as I talked about before, we add a lot of the humanitarian components to the exercises now. That is something that is new, and it's also something that can be used, that as all of you realize a lot of what you do is part of the CINC's theater engagement plan for subject matter exchange, and because disaster work is recognized as being neutral by most countries, it's not threatening, and can be something that's integrated in the exercises and used as part of the theater engagement (next).

Our public health unit also does some technical consultation, and I'd like to draw your attention to the third major bullet, and we're working on this with NAMRU 2. It's a hand-held device for early warning. I don't have pictures of it here, but Joel Salaniccio, one of our CDC members of the staff just got back from the Thai-Burmese border where he took it out to do a nutritional survey. Now they've done lots of nutritional surveys there at the Thai-Burmese border, and this was more to see how it worked and find out some of the technical problems with it, but taking NAMRU's EWars program, putting it on a hand-held has worked extremely well. One of the things they've found, they gave the hand-held devices to the local health workers, you know, that came out of the refugee camp, and a lot of people said, Oh, my God, you know how we're kind of, some of us are a little

computer phobic, they said, you know they won't be able to figure this out, they'll need to still use the paper. Well, pretty soon the local health workers were fighting over having the hand-helds, because they're a lot faster, it skips questions that you don't have to answer, and only lets you enter the data correctly, and because they didn't know that shouldn't know how to use the hand-held device they did just fine. And this has been a very good collaboration between NAMRU and the Center, and we're going to be testing this at the end of February in East Timor, and it's just looking at symptom-based epidemiology, looking at fevers, diarrhea, cough, that sort of thing to try to sort out what some of the problems might be, and again, a good collaboration between NAMRU and the Center (next).

We have two CDC members at the Center, one is Joel Salaniccio, who is an epidemiologist and also uniform public health officer, and then Gary Rein, who's a program manager with CDC, that are actually stationed out here (next). And we are a WHO collaborating center, and you know sometimes when I am putting this in the talk and talking about it to let people know my position in life, you know how really important people have really short names like Pope, Senator, CINC, well, I tell them I am Pat Hastings, the deputy director of the Center of Excellence in Disaster Management and Humanitarian Assistance, a World Health Organization collaborating center for civil military relations, and that puts my position in life totally in perspective (next). Just as an aside, before I leave that thought totally, there is humor with it, but at the same time one of the things that that allows us is that this is another avenue to work with some of the NGOs that wouldn't want to necessarily want to work with civilians or with the military. And as a WHO



collaborating center, that gives us that extra avenue, and can be helpful to you if there's some integration that you might need help with, we might be able to do some of that.

Information Management. I don't know where the second bullet's going to go, now that Vice President Gore's not working with the ???, I wouldn't even hazard a guess. We have been working on some of the lessons learned with that, but that may change. Bullet number three, we're working with Harvard University and taking direct news feed out of Reuters and parsing it to look at problems that are coming up now. A lot of what we've looked at is economic and security, but based on a request of Glen Wasserman, we've parsed at Reuters after the cholera outbreak in Ebeye to look at what were some of the problems and could we follow anything. It's actually somewhat amazing, this computer program which reads really fast, was able to look at a number of different problems with regards to tuberculosis, cholera, as well as other infectious diseases that are in the everyday papers, and I think that has great application for the future. Can anybody remember "Three Days of the Condor," by the way? That movie? Remember when Robert Redford, they said what do you do, oh he reads. Well, this is what that computer does, just, and it is able to point analysts such as Glen Wasserman to look further in certain areas, and Glen and I are going to be working a little bit on seeing where some of that can go.

**Comment?:** That's also how John Nesbitt did this whole mega trends thing, essentially reading small newspapers all across the country and finding trend analysis essentially.

**LTC Hastings:** It's extremely interesting, and you know the Reuters is just because it's all electronic, but those are the two things that might be of most interest to you is the project with NAMRU and then the parsing of the newspapers. And one of the other things that we've just taken on is taking some of the lessons learned from previous disasters and humanitarian interventions and putting those into our matrix and try to make them more useful. For example, if you're going to go to a hurricane, you can pull it up, and in a the matrix it will say these are the 10 top problems, and make it a little bit more easily accessible to people trying to plan, instead of having to go through a lot of the AAR's and read them over, you know, going through not only the executive summary but everything else, and trying to glean information from it, to do that for them ahead of time (next). Again this is part of the computer parsing program, but one of the things we're also doing with this computer parsing program is we're doing field event reporting with UNICEF and World Vision. These are two agencies, UNICEF being part of the UN, World Vision being the largest NGO in the world, and taking security issues and putting them into a database so that we can follow a trend analysis there (next).

Some of the places that we've been in the last year (next), we'll go through these kind of fast. A lot of this is the exercises and just adding that humanitarian and medical component (next, next). When I was explaining this to the CINC, he wanted to know why we were going to Fort Leavenworth, Kansas, which was kind of out of his AOR, and we explained that it was the last chance at the Commanding General Staff College to get your hands on young, moldable brains, and I think he understood that (next). And we go out of the AOR on occasion if there are lessons that we can

learn in other parts of the world and bring those back to this AOR. For example in South Com they have a very well developed natural disaster focus in many of their exercises and we can bring those back to this AOR (next).

So in summary, these are some of the things that we try to do. I would invite any of you that would like to get information from us or to see if there's any tie-ins that we can do with some of the civilian agencies, to let myself know or many of the other people that raised their hand that they've worked with the Center before, because certainly Glen Wasserman, Jeff Yund, COL Schor and many of the others in this room that have worked with us before could tie you in with some of the affiliate faculty and agencies that we work with.

**Dr. LaForce:** Questions? Yes?

**LTC Hastings:** Sir?

**Dr. Ostroff:** A couple of questions. I wonder if you could comment about your staffing?

**LTC Hastings:** Our staffing is two military and we have a new director. Our first director was Skip Burkle, and we now have our new director who is Pete Bradford. He comes to us from the USAID, and he was the head of the office of foreign disaster assistance for the last 11 years, and he will be a great benefit to us. We have two CDC personnel. The two military are myself and our NCOIC, the rest of the people are basically contract status, and in that contract status there's a wealth of talent. We have one person from, formerly from World Food Program, two people from United Nations department of peacekeeping operations, one person from OCHA, the office of the coordination of humanitarian affairs at the UN, and a United

Nations peacekeeper, a Swedish peacekeeper, as well as several others, but the full staffing is 24.

**Dr. LaForce:** Are these people all seconded to the unit, or do you pay for them?

**LTC Hastings:** We pay for them. We've just been lucky enough to be able to attract them, even though they had positions on the outside that they could have stayed with. For example, the Swedish peacekeeper could have stayed with the Swedish military, but decided to come. Of course though it's winter in Sweden right now, so maybe Hawaii...I know how that came about.

**Dr. Ostroff:** The other question I had is regarding how, is it the same way as was described how you get invited to participate in a disaster, has to go through the State Department, etc.?

**LTC Hastings:** Correct. We have to be invited in and even if we are invited in as the Center we also have to go through the CINC and make sure that his blessing is given, since we're under PACOM and Tripler.

**Dr. Ostroff:** And then the third question I had is, is this the only center like this?

**LTC Hastings:** Yes at this time it is. We are the only center that is for civil military relations. Now, that said, South Com is putting together one. They have worked with the University of Miami fairly closely for some of the academic things that we do, but the University of South Florida and Tulane are putting together a center there, which is more of an academic focus, and I know that Eu-Com is

interested in putting together a center, probably affiliating with some of the European universities.

**Dr. Ostroff:** The only thing I'll mention is that the Canadians have also created a system where they sort sift through the world media, while keeping a global public health information network, then when they find things they feed it to WHO, and that's been WHO's major source during about a lot of the outbreaks that subsequently come to their attention. It's a great system.

**LTC Hastings:** One of the largest problems with that is populating databases, and you know, hopefully we're going to figure out, or you're going to figure out a better way of doing that, because what the Canadians feeding into WHO, they're still are other avenues that they might try, and we still don't have that right yet. I know that they have the HI-Net project in Geneva, which is Health Indicator Network Advanced Planning, and they've got a beautiful shell, which was put together there in Geneva by UNHCR, but there's no population, you know, once the shell was made, nobody was populating it with any information, and that's been a great problem.

**Dr. LaForce:** This is just a terrific, whose idea was this? Was this Congress's idea?

**LTC Hastings:** With all due respect, no. No, actually the way that it came about was that Dr. Burkle and Ambassador Selmon, and Ambassador Selmon is a professor at the Asia Pacific Center for Security Studies now, and the CINC at that time sat down and said how can we do this better before it hits our AOR? And that's how it came to be, and then they spoke with Sen. Inouye, who said this is something

that I really want to support, and Sen. Inouye put the legislation together, and that's been the template for all the other centers that are trying to start out also is what Sen. Inouye put together.

**Dr. LaForce:** No, because we had a presentation on humanitarian with the board, a presentation on humanitarian assistance, probably about three meetings ago, maybe about a year ago, and as I recall it was at Ft. Detrick. And the main component of that was again these episodic, just sort of like helicopter drop-ins after something and the board was concerned because these episodes were fine for what was provided over the course of maybe a week or two weeks, but in point of fact they seemed to be more like training exercises for the military, rather than a well-thought-out humanitarian process. What you're describing is something quite different, and much, much more exciting.

**LTC Hastings:** One of the things that we're learning in the AOR that we're trying to add into the exercises, is that the initial emergency response might be assisted by military, but our exit strategy is give the NGOs and the international organizations the support they need to get them up and running as quickly as possible, because the sooner they're successful, the sooner we're going to be able to exit and be ready for the next deployment. And that's actually one of the strategies that's really being put to the fore in our exercises right now, partly because of the additive factors that we have.

**Dr. LaForce:** Ok, but as a teaching and training center, can you give the board some kind of idea of how many individuals you've actually trained so far? Is it in the 10s or in the 100s?

**LTC Hastings:** If you're talking about the CHART forces, and that we're just getting to the sustainable point where we're trying to train trainers now. We've trained about 4,000 people with CHART. That's the one-week course. With the HELP course in the summer, we've done that for five years and we teach only 30. It's very intense. And 15 of those each year will be military. And in fact we have a graduate from that, the HELP course, in the second row there, and I think Dr. Wasserman would say that it was beneficial.

**COL Wasserman:** In was outstanding.

**Dr. LaForce:** Who underwrites this?

**LTC Hastings:** This is money, our funding is \$5 million and it's from Congress.

**Dr. Patrick:** Is that the sole funding, or is there you know, these other organizations, I mean are they expected to pay their own way?

**LTC Hastings:** What we use them for is for subject matter experts, so really they don't pay to be able to come. We will invite them to an exercise, because normally they don't have a budget for that, and we get more out of bringing them to an exercise to play, for example, to bring the International Committee of the Red Cross there to play the International Committee of the Red Cross instead of having a military person play what he thinks the International Committee would say about POWS or international humanitarian laws has been very beneficial to the military. To actually have someone from OXFAM to say you can't do water sanitation with road crews, why are you even bringing those here? You need it just a bucket and bleach – it has been very helpful.

**Dr. Patrick:** Are there any philanthropists backing you somehow?

**LTC Hastings:** No, not too many philanthropists want to write a check to the US Treasury, unfortunately.

**Dr. Patrick:** But not the Treasury, it seems the Senate though is really based...

**LTC Hastings:** We actually have a legislation that would allow us, and you're thinking exactly the way Sen. Inouye had thought. We have legislation that would allow us to accept it, but DOD and that was from last year, but DOD has not yet put in the mechanism by which they can do that, but they're working on that right now.

**Dr. Patrick:** This would strike me of being of interest to them, but I was wondering if any for-profits might be interested in being sponsor to this, because there are so many multi-national corporations in business and it's clearly beneficial.

**LTC Hastings:** We've been approached, and one of them is very unusual. We were approached by Land O Lakes Butter.

**Dr. Patrick:** That's not one of the ones I was thinking of.

**LTC Hastings:** No, and it's not one you would be, and you're absolutely right. They said, you know we get involved in a lot of humanitarian endeavors, basically because we bring food and we work with mothers and children and maternal child care and that sort of thing. We'd like to be able to get some training in this so we can make better decisions as to how our company will help support these things, and they were willing to pay for that expertise.



**Dr. Alexander:** Can you just describe your funding stream again? You had a one-time appropriation, does it have to get reauthorization each year?

**LTC Hastings:** Each year. Reauthorized. And we're hoping next year to actually be put into the program operation management, the POM cycle, and that way we would become somewhat independent of the every year appropriation.

**Dr. Alexander:** That's a pretty hard situation to be in.

**Dr. LaForce:** I don't know. This is such a great idea. This is a very well kept secret. Ken.

**CAPT Schor:** I am a graduate from out here as Glen was, and it is truly a wonderful course, so I saw the Center from that perspective, but what I've only suddenly realized is that I you know I get back to DC and one of the reasons I came into prev-med was for this whole constellation of issues, only to find that the real fault line is between the CINCs and the services, except for now maybe the Air Force with their international health specialist training track that may help answer some of these needs. The services, I mean it's not on our cycle, there's a recent board member who was brought on the board to bring his expertise in this area and it never got used.

**Dr. LaForce:** Well, he didn't come to many meetings (That's true, that's true), and irritated me terribly.

**CAPT Schor:** That's true, but that whole issue of service concerns versus what the CINCs are concerned about and what the folks that are part of the response forces think they're going to be thrown into and know that they need to know, there's a big sort of a disconnect there.

**Dr. LaForce:** But this seems like a way of connecting everything. You know it's a Center of Excellence, which means you've got the academics, the CDC, and it sounds like you've got, it seems like, a good mix. It's a stable funding that is modest, but it appears to be at least stable enough to maintain the educational training sort of aspects of it. It just seems like such a great idea.

**LTC Hastings:** Well, what I would invite you to do is as the board meets is if there are ideas for where we can have a synergy or where we can collaborate, we'd be very open to exploring those with you and seeing where we can help you and vice versa.

**Dr. Patrick:** Well it seems that one of the things is to perhaps move the agenda just a nudge to move toward sustainability separate from congressional authorization all the time. I mean this strikes me as something if you actually got the word out on what you're doing would generate tremendous interest over different sectors and potentially have partners to move on, so again it's not writing a check to the US Treasury, it's and I say this at some at risk, because university environments are not always the healthiest environments for these, they can be toxic environments for these projects as well, but if you could somehow nurture this to move it to a point where it is in balance with these various partners but free of constraint of reauthorization on an interim basis which can change on a whim, it would be very useful, because obviously it's extraordinary.

**LTC Hastings:** And as I said, you're thinking exactly in the way Sen. Inouye has put into the legislation, the ability to take up funding, because I think his plan would be even if there, we would be POM-ed as far as sustainability in the

military system, he would like to have something that would be housed in another venue to support us, so.

**Dr. LaForce:** Thank you.

**LTC Hastings:** Thank you.

**Dr. LaForce:** The last presentation this afternoon is Dr. Ward from the CDC, Epidemic Information Exchange, the acronym EPI-X? Is that it?

### **EPIDEMIC INFORMATION EXCHANGE**

**Dr. Ward:** That's right. Thank you very much, thank you for having me. Three mics, we actually have four microphones, I get the impression that none of them really work very well, but if we put them all together you'll be amplified all the way in the back, speaking as somebody who's been sitting in the back all day, maybe if we can improve that by tomorrow that would be great. I want to thank you very, very much for letting me come. My name is John Ward, and I'm from CDC. I've never been to an AFEB meeting before, but I've enjoyed it up to this point, and I hope you enjoy it for the next 20 minutes when I'm talking here about EPI-X. I'm the editor of the MMWR, that's my day job at the CDC, so I'd be more than happy to talk to you about the MMWR and how well that's working for you as public health people in the military during breaks and at dinner tonight, etc. It is the 50<sup>th</sup> year of the MMWR, so we've got a number of things planned to celebrate that. But what I would like to talk about today, though, is a new communications network that we have developed at CDC in collaboration with our partners in state and local health departments to respond to their need (next slide please), to have a way to communicate more quickly about public health events as they are emerging,

outbreaks being identified and investigated, to have information as quickly as possible to alert others across jurisdictions about what's going on, and then also to begin a communication stream that will actually help people respond to those events who are on the ground trying to identify the cause and take corrective action. And through the internet to develop a network that could link responders and people responsible for responding to these emergency health events together (next slide please).

What we set about doing in October of 1999 was what's called a user center design process where we actually began to develop really formative research about what kind of network should we develop to really be useful for public health officials (next). We then put out some preliminary designs (next slide please), then set about with focus groups and demonstrations to a variety of different audiences, both within CDC and at the state and local level, and then fed that back through this to come out with about 30 different versions of this website, after involving over 350 health officials at the state, local and federal level (next slide please). What we got was the following. We heard that people wanted a way to expedite the exchange of information, so we did a number of different things. Number one, they wanted to be certain who was contributing this information, in contrast to more publicly internet-based outbreak reporting systems like Pro Med where anyone can submit. People really wanted to know who was submitting information to the system. They wanted people to watch the system, to moderate it on a 24/7 basis, and we have done that, and they wanted to personalize the system so that only the information that they wanted came to their website and to their email account, so if they were food borne

experts and that's all they wanted to get then that's all they'd be troubled with so you wouldn't inundate people with information (next slide please). They wanted a way to help them identify outbreaks more quickly. They wanted a searchable database so they could go and query that at any time. They wanted a way to link similar reports together, so we developed a system that allows them to do that, and we created a system that helps them automate the updating of reports, so if they want to provide multiple reports about an outbreak the system automatically repopulates information they've already submitted previously, so that way they only have to change the information that's new (next slide please). They also wanted real time discussion features that were not moderated so we put that in. They wanted personnel directories that would help them find other people more quickly, even things like the CDC phone directory. We have a CDC resource index that helps you search by topic to find subject matter experts is on there. Directories of the major public health organizations: CSTE, ASTOW, etc. are on here. Information resources that we hope would help them in times of an outbreak. Right now we have FDA outbreak reporting websites, USDA, all the state and local health departments, etc., and those kind resources will grow with time. Epi-Aid is the official way the state health departments request assistance from CDC and other health agencies. We get about 100 of those a year. It does help people become aware of what other states are facing to the point where they're requesting information from CDC, so we put those requests up as quickly as possible, and we've created a way for someone to actually request that assistance on line, so they don't have to go through a paper-based process that would take more time. The Trip Report is really what people write up

when they come back from the investigation, so people can see the alpha and the omega of an outbreak investigation, and then over time this will become an increasingly rich resource for people to see what others have found and what they did about it (next slide).

Another important feature of EPI-X is that people wanted to make sure people got information, so we put in various notification options. Routinely, the information would go out by web and email. If you wanted to urgently contact one, some, or all users, you can use the web interface provided by EPI-X to alert those people. Their phone will ring, their pager will go off. In fact, sitting back in the back a couple of hours ago we had an emergency posting from a state health department, and as a moderator of the site my pager went off to alert me that there was a report awaiting review prior to posting, so it does work, as I'll show you a little bit more in a moment. And then users can either go to the site or go to a toll free number to get specific information (next slide please, quick just tap a couple of times). We have various user categories based on their responsibilities within their agencies so only certain people can post reports, to hopefully improve the, to institute a level of quality. Others can read those reports and use the other services with editors or moderators, and at some point we'll launch a general public site, with information that's suitable for the general public (next slide, next slide please). Security really makes a lot of this possible, creating an environment that allows people some comfort level to share provisional information. This sits behind the secure data network at CDC, which encrypts data from point to point and requires authentication of users. It requires the downloading of a digital certificate into your

computer. We have management policies to limit access to only certain individuals. Users have to sign an agreement that outlines their responsibilities for information management and sharing, and we emphasize all this in ongoing training and support (next slide please). You go in through a, this sort of shows you how you gain entry into the system by entering a password (next slide). This would be your, this is your personalized website that shows the status of any reports you've submitted to the system over the last several days or weeks and all the postings that match your area of interest. If you want to expand that any time, you can go over and look at all postings on EPI-X, and you have various links and information features on the left as is customary on most websites (next slide please). This shows you an example of the web interface that allows you to designate people who need to get emergency information, or just information routinely if it doesn't match their area of interest (next slide please).

Where are we now? EPI-X is fully operational, so it's not just some, you know, pie in the sky idea at this point. Since Oct. 1 when we began to make the system available to others, this just sort of shows you the traffic that we have on there. The type of reports that range from foodborne outbreaks, vaccine recalls, outbreak of vaccine preventable diseases, occupational hazards and environmental hazards. We've also been positing Epi-Aids as you see there. We have had two urgent postings, posted by straight epidemiologists of multi-state, foodborne outbreaks, where they used the system alert feature to alert everyone on the system. And in an evaluation program that we can run, we calculated about 79 percent of the users were notified within about 40 minutes, either by computer-based or by

telephone/page based system. And we're continuing to roll this out (next slide please). These are the people we've designated to be on EPI-X as part of the initial roll out, at the state level, primarily or at the major city level. A lot of the concerns around more rapid notification of outbreaks and health alerting has been around bio-terrorism, and so we wanted to make sure that bio-terrorism surveillance coordinators were on the system and that these people out in the states are linked to the CDC programs so they can use it as subject matter experts (next slide). This shows you the distribution of states that are on the system. We sort of use this map to track whether states have applied to the system, are on the system or have actually posted reports on the system. That's all the different shades of blue. To look at the worst-case scenario at the moment, the dark blue represents the states that have not yet got on the system. So the majority of the states are actually either on the system or are in the process of applying for their digital certificates and getting on EPI-X. Hawaii is not yet on the system, and I'm going to visit them tomorrow to orient them to the system (next slide please).

We have really tried to promote EPI-X and develop it and manage it, and hopefully change it over time in a very collaborative nature, to make sure the user is considered through all of that process. We have established an EPI-X board that is comprised of state epidemiologists, state health directors, environmental epidemiologists and the like to be there for us, to see how the system is being managed and to provide us some ongoing source of feedback and general direction from others. We want this system to be there for everyone in public health responding to these kind of outbreaks so we can develop a very collegial



arrangement, rather than a top-down management structure that limits information flow (next slide please, I think this may be the last one). We have already gotten through this collaborative process. We have already gotten some good ideas about where to go from here. In this month, actually, we'll begin to develop a secure form feature within EPI-X so you can actually pull in a group of people who are responding to a multi-state outbreak. This was a stated need during the West Nile outbreak, and New York City has been one of the groups pushing for this kind of application, and the West Nile group is proposing to use this during the next season of West Nile starting this summer. We are working with groups such as the food born disease group at CDC to link EPI-X to outbreak surveillance systems, and we are collaborating with state and large city health departments who have been given money to develop health alert networks to see what are the integration issues there. I wanted to come and talk to the AFEB, primarily to let you be aware of this system coming on line, and I think hopefully, if we've designed it right, it will become a useful tool for people to communicate quickly within public health, and I think many of the issues that we've discussed about today could have some application for you getting in, involved in this network, but really at this point just want to let you be aware of it as a point of discussion around that. That's it.

**Dr. LaForce:** Thank you.

**Dr. Ward:** Thanks.

**COL Withers:** Questions? Yes.

**Dr. Ostroff:** I'll just make a couple of comments. One of the things that's always perplexed people is that outbreaks are not reportable in the United States, and

there are thousands of outbreaks every year, most of which get investigated by local and state health departments, that we have no mechanisms to capture, so we only tend to hear about them when they ask us for some sort of assistance. And it's always been sort of one of the gaps that we have in the system in the United States, is that we have no mechanism to capture a hundred, I mean people ask us how many Legionnaires outbreaks are there per year, well we don't know, because they don't report them to us and we don't know anything about them. So this is a mechanism whereby we can in a stylized fashion capture information about outbreaks that go on in the United States and be able to rapidly share that information with the people that need to know about them. And very often one of the problems that we've had, I mean some of the genesis of this is, you know, you might remember a couple of years ago that Hepatitis A outbreak from the frozen strawberries up in Michigan. Well, it turned out that outbreak was going on in several other locations as well, only because they didn't think or they didn't hear about the one in Michigan because initially it wasn't reported, they were never pieced together until well after those outbreaks were over, so this was sort of our idea to have a mechanism to be able to notify everybody about things that are going on. And I think from the standpoint of the services, specifically for the preventive medicine liaisons, I mean you ought to at least be readers, because you will hear about a lot of outbreaks that are going on very close to many bases and at the very least you can notify the public health people on those bases that there's something going on in their area, which they otherwise may have no way of finding out about, because very often the states, and especially the local health departments, can be quite protective about releasing the outbreak

information, if they feel it's going to end up in the newspapers. And so this might be very useful thing for you to get on board at least as a reader.

**Dr. Patrick:** I really second that , and in the past, in the early 90s I worked with WHP in information ecology policy and certainly there were a lot of discussions going on info network, and I assume this is a successor here to some of the info stuff.

**Dr. Ward:** Yes.

**Dr. Patrick:** I notice a couple of the same names. This is actually what was talked about in the early 90s when the web came on in terms of what the real potential is, that is. It's very, very exciting, and I just think this is great. I think part of this, the value of this is really a critical mass value. Got the fax machine, but unless you got enough people using it, it's never going to be useful. So what are you doing to accelerate the uptake; the map looks ok, but are you really attempting to incent folks to get them to sign on?

**Dr. Ward:** That's right. I think that's an excellent point. I mean you can't be a communication system if there's no one there to communicate with, or the right people aren't there that people feel like they need to get in touch with, so we have spent a fair amount in marketing, put letters out from the deputy director of CDC, encouraging people to be on the system. The Council of State and Territorial Epidemiology has endorsed the system, encouraging their members to be on it. Some of the programs, like West Nile, for example, want everyone, and the BT program, actually have sent out letters, stating that all of the people who are managing those programs at the state level should be on it. They stopped short of it being a requirement for funding, because we don't like to put a lot of requirements

for funding in, but they feel that strongly about it. So I feel like those kind of efforts, in addition to just putting up good content and sort of showing the proof of the concept by the type of information that's going up on there will be, all those things will be critical to its success.

**Dr. Patrick:** I presume again this presentation in part is to get a sense of whether or not this group will actually support it. I would think as you at least readers. I would vote participants, because again what we're really talking about developing here is a sensing network that can really allow everyone to know what's going on, so I think it would really behoove the military to be more than readers but active participants in this, because this process is going to evolve over time, and we all need to get more experienced about how we can actually communicate with one another. I think this is great infrastructure.

**Dr. Sokas:** I guess a clarifying question on that is are you inviting the military to be active participants, as opposed to just readers, and does, do the service representatives have thoughts about how useful that might be, or not?

**Dr. Ward:** I'm inviting some consideration, and obviously some interest, and if there was interest, I would like to work with military to see what would be the right process. We have had some military officers. I don't know a lot about them, I don't have their names with me, who have asked for access to EPI-X, which I've turned down, because I just didn't want it to be a hit and miss and I didn't know who those are. I mean I think if the military was involved, which I think there's some value in, I think it just needs to be a way, some people helping us with who should be on it and who they are and then we can get them on at that time.

**CDR Ludwig:** I am very interested. The Coast Guard in the last couple of weeks even though I'm not in my job, I still have to deal with people wondering about the meningococcal outbreak in the Houston area, and I've had a couple of other things. It would be very useful, instead of going through all of the web searches, find the state epidemiologists' telephone numbers and then calling them and finding out, if I could start with something like this. Also, when we have outbreaks of influenza or gastro-intestinal, especially with the Coast Guard we are, we don't have large installations, so our people are scattered throughout the civilian communities, the civilian communities, and it, there's a potential for a lot of interaction between the communities and ourselves.

**COL Bradshaw:** Communities are interweaved and certainly with the locals and state health departments have a lot of collaborations. Do you, are you proposing EPI-X, is this a kind of parallel to the normal reporting mechanisms up to CDC on reportable events or is this separate?

**Dr. Ward:** They would separate. Those systems are for infectious diseases are notifiable. We collect a certain amount of information under a case definition. This would be here, would be, maybe you don't have all the confirmatory information which would allow that information to be reported officially, but you might want to get that information out, it's more of a rapid query for other cases, have other people seen this. This is more of a discussion forum where you can go ahead and begin to develop a response in collaboration with others through this, so those are the, I think those are the features here that surveillance systems that we have now just don't provide.

**Dr. LaForce:** This is like a sort of Epi work in progress sort of stuff, that is sort of an exchange of information when it makes a difference in terms of number one, identifying, notifying that there is a hazard out there, and if something needs to be done that something can be done more expeditiously than might be the case, until you wait until the final “I” is dotted, the “T” is crossed, you finally report the case, when everything stopped three months before. (Exactly.) This has always been the tyranny of reporting systems, is that after the search for cases, and you sort of fool around with this it’s just not very helpful if you’re a public health individual, particularly with all the movement that’s going on right now. This is a terrific idea. I would think that CHPPM might want to at least consider, because that would be I think the logical group to actually discuss this, or is that not right?

**COL Bradshaw:** Well, I think certainly AMSA medical surveillance is a system that we’re trying to have tri-service representation there would certainly be a locus, although I think all the service PM officers are certainly interested, and I think our Epi hubs at each of the different services, like ours is in San Antonio and NEHAC and Fort Smith area and AMSA would be the all main players, I think, and they could disseminate any information out to our communities.

**CAPT Schor:** You know I think that the read-only aspect of this is the way to start. Granted, it’s like let me look into your house, you can’t look into mine, but when we were doing some of the planning with the flu vaccine issues, we were very concerned about getting some idea about what was going on outside the gates, and obviously this could be potentially very helpful if the flu season had turned out differently than it seems to be, so to speak. But when you start getting at exchange,

I'm not a tech head or a wire head or anything but it seems to me when you start allowing that bi-directional exchange, that in the Marine Corps we have what we call the **mid-knock** Nazis. Those are Marine Corps captains that tell LT Generals in the Marine Corps what they can and cannot do with computer systems. All of our firewalls are centrally managed. Many of the services are going to very elaborate firewalls for their dot mil email addressees and that includes websurfing capabilities and whatnot, so I'm sure other services will have to deal with similar things, and once you start allowing that I would think it would be easier to start first with the read-only, that might get us over some of those firewall issues, and then as we see how it can be used it might work better.

**Dr. Patrick:** I'll respond to that. Part of it is, and I guess that's part of the question you mentioned, talking about articulating with other networks. The success of networks that have evolved over time and really grown and become highly functional have been not so much that someone has created something that asks everyone to use it, that there's a set of standards and processes that others build their networks to, and ultimately they become linkable in some way. And I'm wondering I guess is that the questions is if the CDC has done this in such a way that you could suggest or perhaps might have been next step be how to talk about developing common standards and processes, so that down the road there could be merges between what it is that the military can make, and the other group that could benefit is managed care, the whole managed care industry in terms of the information they're beginning to collect on line. Kaiser, you know Kaiser is starting to collect almost all of their information on line. What better source to get initial information

with respect to certain types of communicable diseases elsewhere? It's the notion of promulgating standards and processes to which one builds, rather than I've got it, you come and join me, which obviously there's always the temptation to do that because your first test with the most test, but that's, you back off on that. So I guess has the CDC thinking about doing this in terms of developing certain standards, and do they need partners to help them now to help them build EPI-X 2.0 and 3.0?

**Dr. Ward:** That's what we'd like, and that's what we put in money to help us with, beginning this year. There's a huge effort to develop standards for our surveillance systems and outbreak reporting is part of that. And I can see EPI-X and outbreak reporting standards sort of coming together here in the next several years. I think we're trying to move to that area. Quickly, and I know that I've been out of town, just to respond to that I think you really get into some technical issues about firewalls and stuff and we can probably talk more about that, but I think those firewall issues are there regardless of whether you are a reader or a contributor because you're still going back and forth with information. I think this shows how we probably need to flush this out as to what kind of collaboration you need. You may just want to limit very strictly who is a contributor but not shut off that option totally for the military when you may want to have that, you just may not want to use it very often, but if you're just a reader only, that means you can never file a report, you can only comment on others, and you may wish you had that functionality at some point. That's all I'm saying. I like the show of support, and I think if we can, I'd like to develop some kind of working relationship and perhaps even to the point



of you being up on our, someone from the military services being on our advisory committee so that we can keep your needs in mind as we move forward.

**COL Withers:** John, if I were tomorrow to write an E-mail message to the 100 Army Preventative Medicine officers, and give them this thing, could they just write EPI-X and you may get 30 to 50 requests to be readers. Is that what we should do, I mean what happens from there?

**Dr. Ward:** Well if we wanted to go there, if you wanted to have 100 people on the system...

**COL Withers:** If we invite everybody on, there may be 20 to 40 I'm guessing.

**Dr. Ward:** Well we'd want to file in what kind of training materials do they need to receive before they come on. You need to give us the names of those individuals so when they sign up, we know who they are and then we can approve them as they come on.

**COL Bradshaw:** Did I hear you say you were keeping this to state level right now?

**Dr. Ward:** Right now it's state.

**Dr. Sokas:** It hasn't happened yet.

**COL Bradshaw:** In my mind it wouldn't be necessary that we tell our entire public health...

**Dr. Ward:** It's, I think your idea of keeping this at a small number initially sort of as gateway points into the services, they can then disseminate throughout is probably makes more sense at this point than having large numbers from the military

till we get people comfortable with the system and knowledgeable about it can and cannot do.

**COL Withers:** Well with that in mind, I would like to invite say our seven regional preventive medicine officers and the 30 or so post preventive medicine officers, and you might get a pretty decent response amongst that group of say 35 people. Should I ask them to contact you individually, or go to EPI-X or CDC.gov?

**Dr. Sokas:** All right my reaction would be to have John actually sit down and meet with the board or the group...

**COL Diniega:** Why don't we work this through the Joint Preventive Medicine Policy Working Group and each of the services can look at who in their service should have the capability to play at EPI-X at this point to start the ball.

**COL Withers:** That's a good idea. Let's take it up on the first of March. If you're available the first of March we may call you and just to discuss it all together, probably it would be the first of March.

**Dr. Ward:** Sounds great, sounds like a good next step.

**Comment?:** You've got the five or six people in the service who in this room right now who know how to help you figure out who would be the best people.

**COL Withers:** That's why we had this lecture here, because the preventive medicine. As I told you the JPMPG is really the right place for this. It just happens that we're all here.

**Dr. Ward:** And here was Hawaii. I had two missions here.

**Dr. LaForce:** Thank you very much.

**Dr. Ward:** Thank you.

## ADMINISTRATIVE REMARKS

**Dr. LaForce:** That finishes the formal part of today. I'll let Ben go over some administrative comments.

**COL Withers:** A couple of things. It's raining today, so the weather's not conducive to our driving tour, so we're going to take today off instead, and shift the driving tour to tomorrow, weather permitting. So you're free this afternoon. COL Diniega in a moment will give you some suggestions in a few minutes that you might see in the local area should you want to. If you didn't get a chance to sign the card to Dr. Burkle, please do so. I'll have it all week, I'll take it back and mail it next week or something. Dinner tonight, 7 o'clock. Be there and ready to go with cars, with cars this time. With cars at 7 o'clock. Don't disappoint me. The instructions are about eight lines. I will write out about five or six copies this afternoon, have one for everybody who needs one.

(Administrative matters continue...)

**Wednesday, 07 February, 2001**  
**Hale Ikena, Fort Shafter**

**(0800)**

{Transcription: Tape 5}

## ADMINISTRATIVE REMARKS

**Dr. LaForce:** Call the meeting order. We'll begin with a couple of administrative announcements that COL Withers wishes to make, and then we'll

move right on to the Tripler Army Medical Center initiatives and Dr. Takafuji will give that presentation.

**COL Withers:** Thank you. Just a few things this morning. There's still plenty room to sign up for the Remembrance Barge and for the city tour. It's going to be a windshield tour of parts of the city and a few outlying areas, so the sign-up sheets are in the back. Please sign up, again the tour today will start at 15:30 down at the Hilton Hawaiian Village and run till 18:00, then tonight is free. I'm particularly glad that the barge tour has room, that's going to be a nice deal, so everybody feel free to sign up. If we go past 35, we'll have to make some decisions, but we're not closed now. And finally, lunch today is very much like yesterday. COL Diniega will be handing out tickets, so he'll give that to you this morning. Thank you.

**MG Adams:** I just want to take a moment for some unfinished business, and that's because another member of the board has just joined us today, and that's Dr. Elizabeth Barrett-Connor, and we did not want to deny you the official Hawaiian welcome, so on behalf of Tripler Army Medical Center we want to present you with this lei. And now, I just want to introduce COL Ernie Takafuji, who I know doesn't need any introduction to this group, because of his distinguished career in Army medicine and much of it in Washington, DC in preventive medicine community, but I need to tell you from my perspective as a commander out here in the Pacific, this is a vital asset for me to have someone with his preventive medicine experience, as well as his research background, because as you've heard yesterday and continue to hear today, there is a lot of activity going on out here in the Pacific, some of which is

unique, but some of which is important in terms of the total national agenda for military medicine's perspective, so having someone like COL Takafuji with his credentials to help us make that connectivity, and I see the AFEB here in Hawaii as part of that connectivity, because it's an opportunity for us to share with you what is important in terms of what's going on here in the Pacific, so COL Takafuji, you're on. I'll let you do the work.

### **TAMC INITIATIVES IN PACIFIC RIM**

**COL Takafuji:** Thank you, ma'am. Let me first of all say that indeed this is an honor for me once again to address the AFEB having addressed you in a variety of different capacities in the past over the last 15 years. Together with GEN Adams, let me also express our shared appreciation in having you make the decision to hold your winter meeting here in Hawaii, because it gives us an opportunity to share what some of our experiences and some of our priorities are here in Hawaii. By now you have probably appreciated some of the unique aspects of things here in the islands. I guess with the exception of Dr. Barrett-Connor, who really needs to get the information on the PACOM brief, especially to re-understand why this is such an important area for us, I think just to recap a few things: 52 percent of the world covered by this area of responsibility, extending from the east coast of Africa, all the way to the west coast of the United States, going from Arctic to Antarctic, including the things in Hawaii, things in Alaska. Most of largest armies in the world being located here, and for that reason very strategically important, and economically also very thriving area and certainly a focus for the 21<sup>st</sup> century. All these things point to the fact that the Defense Department and other federal agencies need to have a very

large footprint here, and of course, here in Hawaii, that's a very logical place to have that. Now the relative isolation and the geographic separation from the mainland has become pretty evident to everyone, I think, by now, and for that reason there are some unique capabilities that really need to be maintained here in Hawaii in order for us to have a US presence in the whole region.

This morning's presentation was originally entitled TAMC's Initiatives in the Pacific Rim. I'm going to change that a little bit, because you'll be getting many of the briefings and information tomorrow pertaining to the hospital itself with GEN Adams and her staff, so I'm not going to get into things like details of the GME, Graduate Medical Education program and things like. You'll hear about that tomorrow morning, but what I'd like to emphasize or concentrate on today are the special programs that we have been involved with. For the most part, these programs have been directed by Congress, but they have impact that go far beyond TAMC. They have to do with programs of national importance, and because of the geographic location of Hawaii, as well as the cultural diversity of the Hawaiian Islands, combined with our ongoing programs, you can easily see why many programs have ended up on our doorstep. Before getting into the Congressionally mandated programs, though, I would like to share several initiatives that are ongoing that are of interest to the board. For example, we have some programs that are now in evolution with the Centers for Disease Control and Prevention, one of them being the pre-position of one of the PUSH packages as part of the national pharmaceutical stockpile for bio-terrorism. So if there is an event that occurs either here in the islands or in the region, the PUSH package would be able to get there faster. That

allows for much more rapid response that the United States can provide. We're expanding into some other areas that have to do with telecommunication, as some of the additional initiatives that are growing with CDC.

Another of our efforts is the diagnostic arena. We're beefing up our capabilities at Tripler to be able to do diagnostics, not just for bio-terrorist agents, but also for diseases that are endemic to our region, with the idea that many military members and their families may be exposed and may be incubating disease, and there is a risk of course of importation, not only through the military but through international travel to and from Hawaii. This is done in support with other laboratories to include the US Army Medical Research Institute of Infectious Diseases or USAMRIID at Ft. Detrick, but laboratories also, and this of course supplements the activities of the State of Hawaii in this arena. A third effort has to do with something of great importance and interest to the board, and it has to do with illness surveillance in the region. Now we do this in partnership with our service colleagues, for example our relationship with CAPT Beecham and EPMU 6 is a real one. It's one that needs to grow and develop even more, with shared assets, and this is indeed truly a partnership for the Department of Defense that we are committed to. So all of these things are just some of the ongoing things of interest to us, but also of interest to the Defense department.

Now I'd like to get into some of the special programs, and I'm going to do this in two parts. One part will be some of the comments pertaining to the Congressionally mandated programs (if I could have the next slide), but I'll be followed by COL Don Pearson, who is chief of our Department of Clinical

Investigations and special consultant to the commanding general on Pacific island health initiatives that we have going on. First of all we have programs going on with the Veterans Affairs, the Department of Veterans Affairs. Tomorrow you will see actual commitment of the Veterans Affairs Department in terms of actual construction on the hill, but it goes beyond that because it gets into the programs that intertwine. I won't get into a lot of detail, because I think you'll hear about it tomorrow, but there is a mandate that we have to establish what is known as the Federal Health Care Partnership, which would be similar to the Alaska Federal Health Care Partnership, that would maximize federal resources in the provision of health care to certain populations, such as native Hawaiians. These are Hawaiians that are by blood natives of Hawaii, applying such things as telemedicine technologies. The partnership would include DOD, DVA, but also other federally funded health agencies that would be providing services to native Hawaiians. Just a comment on the side on this, the native Hawaiians are being addressed in a bill before Congress right now known as the Akaka Bill, more commonly, because it is being proposed by Sen. Daniel K. Akaka, from Hawaii, and in essence it's a bill that if passed would give or potentially give native Hawaiians the same rights as other groups such as American Indians and other native Americans in the United States. The implications for Tripler are of course tremendous in terms of the health care that they would be eligible for. So those are some of the challenges that we have pertaining to native Hawaiians (next slide please).

There is a Hawaii Federal Health Care Network--it was formerly known as PACMEDNET--which was intended to optimize the resources that would be



provided to beneficiaries in the region. Obviously, cost-effectiveness is a very important part of that, but also quality and access are important pieces in terms of the health care delivery, and this would, was directed by Congress to be a jointly operated program that would have a central office controlled by what is known as a hui (H-U-I), which is a Hawaiian word that means group, and was the intent of Sen. Inouye, in particular to drive this blending of the efforts of the Department of Defense as well as the Department of Veterans Affairs together, to cross-utilize resources. Just to give you an example of FY01 appropriations, \$1 million would be supporting this partnership, with some emphasis on cardiology, because cardiology, cardiac disease is a significant part of the native Hawaiian health issues. \$3 million would be for military children with special needs. \$1 million for tech transfer issues, and \$2 million for the continued investment to build this partnership over time (next slide please). Now what this type of guidance that we have received from Congress as well as funding, there are some telemedicine initiatives, and these are just a few of the many initiatives, but I just wanted to pick a couple to give you sort of an idea of some of the things going on at Tripler. There is an automated clinical practice guidelines project, in partnership with the Henry Ford Health System, to look at the effectiveness of those clinical practice guidelines or CPGs in terms of influencing clinical outcomes. The initial emphasis is on diabetes. In essence, this is asking questions such as, by following the clinical guidelines, does it really make a difference in terms of ultimate morbidity and mortality with diabetes? The intent is to take this to the next step and to look at other types of health issues, such as smoking cessation, and so forth, but this is the first step in terms of looking at

clinical practice guidelines within the context of the electronic data medical records system that is being used by both Henry Ford as well as by the Department of Defense.

A second project which is really a real world issue addressing some of our military needs—we have a large training area that's located on the Big Island of Hawaii, known as the Pohakuloa Training Area, and at Pohakuloa many of our forces go out there and train. It's really on the slopes of the volcano, Mauna Loa. So it's pretty formidable, pretty barren, but pretty isolated territory, but there are real health care issues, especially in terms of consultative support, because we clearly can't move a whole hospital up there for the small units that they'd be training, so there is a connection that we have made using telemedicine with the referral to TAMC, looking at things such as radiology, that's really proven to be extremely cost-effective to do that with good digital picture resolution and so forth.

That's an example of some of the real world things we're doing now on a regular basis. Also in terms of the concept of store and forward, in storing data and then forwarding that information in terms of consultations. This is something that has been wrapped up into quite a few projects, such as the Theater Telemedicine Prototype Project or is often referred to commonly as T2P2, the Electronic Children's Hospital of the Pacific, or that is also known as the ECHO PAC program, and so forth. These are examples of programs that because of the time zones, and because of bandwidth and communication limitations that requires us not to have ready access, but certainly to have access in a timely manner. Part of this special needs effort is something we have going on with the schools here in Hawaii, where

there are special students with special needs, and it's to use telemedicine in terms of following them, being able to have the school system being able to communicate with experts who are involved in their care to make sure that their needs are being addressed, that's another project (next slide please, next, that's good, thank you).

Now one of the things that Congress directed us to do more recently is to look at the possibility of building a biomedical research center here in Hawaii. The center would be built on the TAMC grounds, because that is federal real estate, but this facility would be a research facility that would be done with the collaboration of the Department of Veterans Affairs to address their research issues, as well as the University of Hawaii School of Medicine for the purpose of making more efficient use of federal funding that has been directed to biomedical research. What we have done is indeed done a feasibility study. We are in the final phases of completing that study, because there is a report due back to Congress in March on the study, but the intent is to really make this into a research and technology center that would be of tremendous importance, not just to the Department of Defense, but also to the Department of Veterans Affairs. The University of Hawaii would add on the academic piece to it, in terms of collaborations with other academic centers. It is our intent to also do this as a crosswalk with our own university connections, including the Uniformed Services University of the Health Sciences in Bethesda, Maryland, and so forth, but really the effort is really to look at our priorities and to be able to address them here in the Pacific. Now there are some real world requirements that we have. For example, we have a Graduate Medical Education program training residents and nurses and other health care providers at Tripler, but that requires some

animal support, and in fact our animal care facility is really falling into disrepair. We're doing basically animal research in one building, and we're caring for the animals in another building, which is really unacceptable in terms of, from an accreditation perspective, so those things that require us to really have a new facility. There also is a need for a bio-safety level three facility with the emerging infections issue, and it should be of some note to you to realize that in the State of Hawaii, there is no bio-safety level three facility, even at the State of Hawaii Department of Health level, so this asset would not only support the immediate needs of the CINC, but it would also address the needs of the State of Hawaii in terms of being able to respond to various contingencies (next slide please).

Now one of the programs that has received tremendous interest has been the Pacific Island Health Care Referral Program. Let me first of all explain to you about the Pacific islands, because this is of course a very broad area. Most people do not know what the islands really consist of, and because of time I really can't get into that, but just to let you know that there are a lot of them, and they're spread all over the Pacific, but the ones we really have been providing care to on a regular basis by Congressional direction have been the medically under-insured peoples of the Republic of the Marshall Islands, and in the Marshall Islands is included Kwajalein, and as you know the Missile Command has some interest in Kwajalein, but the Republic of the Marshall Islands, the Federated States of Micronesia, the Republic of Palau. There are patients that we see at Tripler also from American Samoa, the Commonwealth of the Northern Marianas and Guam, and again because of their unique teaching values. Now, strategically these sites are very important to the

Department of Defense, as well as the nation, and for that reason there are some things that we need to continue to do on a regular basis.

Now, there was special Congressional funding, and just to give you an example, in the FY01 appropriations act, \$8 million to enhance the development and facilitation of health care to the beneficiaries that were authorized to receive care. And in fact we have established a web-based electronic counsel and referral system that COL Person will be describing to you in a few minutes that uses the internet as the primary mode of communication, but of the \$8 million about \$3 million would be dedicated to agreements and programs with native Hawaiian health organizations and academic health institutions, and we're in the process of looking at this in terms of training native Hawaiian scholars and so forth in our facility that would facilitate the delivery of healthcare throughout the islands. The Hawaiian Islands consist of quite a few islands here that are separated. There are actually seven major islands, but there are really about four or five that are, that have the most population on them, but there, some of the communities are in relatively isolated areas, so the challenges and the test bed in terms of looking at some of the distance learning, some of the distance communication issues in terms of health care delivery can be done very effectively here. I go back to the issue of the ethnic diversity, because I know that is an issue, not only for the Defense department, but for the, for Congress and for the nation in terms of minority health issues, and Hawaii is an ideal setting for those types of initiatives to be done, because of our diverse ethnic population. And this has to do with some interest at the University of Hawaii is already engaged on

having to do with issues having to do with genetic differences or predisposition to various illnesses and diseases in different populations.

So all of those things really contribute to the fact that really TAMC can be a tremendous asset, not just to the Defense department, but to the whole research and development community, also to the nation in terms of defining what the health programs should be for us in the future. With that in mind, I'd like to now turn the podium over to COL Don Person, who's chief of the clinical investigations department, who will tell you a little bit more about the Pacific Island Health Care Referral Program.

**COL Person:** Thank you, GEN Adams, Dr. LaForce, ladies and gentlemen. I am delighted to be here. I actually, things kind of come full circle, from '64 to 1966 I was chief of preventive medicine in USARSL (the Southern command), and have since done a bunch of stuff, but probably the most enjoyable in recent times has been my involvement with the Pacific Island Health Care Project here are Tripler (next please). And I'll take you very quickly through this. In 1962 the Articles of Confederation authorized care in military medical facilities for Pacific Islanders on a reimbursable basis. You can imagine that never really occurred. By 1988, Sen. Inouye introduced a bill to help benefit GME at Tripler, as well as to facilitate the care of their, the humanitarian care of Pacific Islanders. In 1989 Congress allocated a half million dollars a year, and that was purely for travel to and from the Pacific Islands. We admitted our first patients under this program in April of '90 and (next please), these are the jurisdictions—Ernie just mentioned them—about a half a million people spread out over the western and southern Pacific (next). And since

the inception of the program, over 3000 patients have been cared for. This got to be very, very expensive in the early 90s where it was costing to provide the medical care between \$8 and \$10 million that Tripler funded (next).

This is a super-imposition of the continental United States over the Pacific, showing the Hawaiian Islands off the main coast, Pango Pango, the capital of American Samoa in the Gulf of Mexico, mid-America with the Republic of the Marshall Islands, the Federated States and way off on the California coast are the Republic of Palau and Yap State of the Federated States of Micronesia. With an international dateline and five time zones (next). And they're from, just like the Hawaiian Islands, the high mountainous volcanic islands to the atolls, which are seen primarily in the Republic of the Marshall Islands (next). Here's doctors and Dr. Talons, expatriate Filipino doctors who for years provided care in Ebeye in the Marshall Islands, an incredibly populous area of over 30,000 people in a square mile (next). Rampant with tuberculosis, little Rambo who had the bad fortune of having a grand mal seizure on the tarmac at Kwajalein and this is Rambo's picture about 24 hours before dropping into coma from tuberculomas tuberculus meningitis, TB of the bone, the GI tract, the liver (next). Subsequently he was treated, restored to health and returned home. This lady thought she was pregnant, was a little bit old from the Marshall Islands. It turned out to be halfway a 90 pound benign ovarian tumor. And the biggest problem in this case was getting the tumor to the pathology lab (next). The JAMA of the Pacific, Kosrae State Hospital, the epicenter in the world, I believe of leptospirosis, we've had a huge number of patients with severe leptospirosis out of little Kosrae (next). And the state hospital in Pohnpei (next). Making rounds here in '94,

'95, this little girl on the pediatrics ward had tropical pyomyositis (next). Chuuk State Hospital—I know one member of the audience spent time there. This is the women's ward. In 1998 February when we in fact installed the first work station, right kitty-corner from this the only room in the hospital that had some modicum of air conditioning, they said it was a little tough taking care of patients during that time, because El Nino had just come through and they were without running water in the hospital for three months (next). This was the pharmacy, so we can't put them on any long term drugs when we send them home (next). This is the LBJ Tropical Medical Center in Pango Pango (next). And Yap State Hospital in the far western Pacific. That's not coral tile on the floor, that's betel juice spittle, which causes everything to turn red (next). This is the state hospital in Palau (next).

And here using some of the first initial telemedicine initiatives, this is the Picasso telephone. I'm at the Pacific Basin Medical Officers Training School in Pohnpei state, consulting with one of my patients in Palau who has systemic lupus erythematosus. We were able to avert an evacuation, very expensive evacuation of this little girl. I was able to adjust her medicine and so forth. The problem with using the Picasso phone was very effective but in the western Pacific long distance telephone charges run \$5 to \$10 a minute and these jurisdictions could not afford that (next). Dr. Talons in Ebeye used to take Polaroid pictures of patients, identify lesions and then fax them to me, and this is such a case. This little child had a posterior encephalocle (next). And then I began to get on CHCS in the early 1996 thereabouts messages that would come with screen after screen of random numbers and letters, and I had no idea what this was. It turned out from the western Pacific,



they were attempting to attach images and make these referrals, all of which had been made in the past on telephone, fax, snail mail, etc. (next please). And in that particular case they were trying to send me an image of this little five-week-old child with a massive hemangioma of the cheek. We were able to bring this child to Tripler, treat with cutting edge medicine, alpha interferon and restore this child to near normalcy (next). And it was at that point that I went to folks in Akamai, then called Akamai, which was smart, think smart and act smart and ask for help, and what we evolved was a very simple storing forward methodology. This is the sign in area (next). We installed this, you heard me say, in four jurisdictions in February and March of 1998, workstations, simple workstations with a computer, a scanner, a digital camera, a digital video camera (and next please). They are able then to online store and forward a consultation (next) with the diagnoses (next please), showing the medical history physical and so on (next) and then submit it (next please). And this shows, in fact a screen from yesterday as of this morning I've had 1,057 consultations and referrals from the Pacific, and it lists them. I'm able to access it without any problem all over the world from the internet and except for the change in time and date, nobody knows the better of it (next please).

And this is just to show you some examples of what has been sent, what we've been able to deal with, some at home. The great majority of the cases like to be taken care of at home. It is not a case of necessarily sending everything to Tripler. This is a 19-year-old girl from Yap with an embriodled rabdomidal sarcoma of the wrist (next). She tried to whack it off with a machete, and here it is up close. It turns out that was a highly sensitive tumor that we've been able to treat (next).

This patient from Pohnpei state, a protuberant chest (next please). This shows a sweet little fellow, 11 months old (next please). We heard bowel sounds, they heard bowel sounds up in his chest. This is a diaphragmatic hernia and they just attached these images (next please). He was restored to health, was brought to Tripler. This one came from the Marshall Islands, they said multiple lymph nodes, English is not their first language, and he certainly did have multiple lymph nodes. It turns out they wanted to rule out a lymphoma. He had in fact had disseminated tuberculosis like we see so often from the Marshall's (next), and the western Pacific. To show some of the military uniqueness that GEN Adams commented on earlier, this gentleman has a squamous cell carcinoma of the buccal mucosa from the betel nut chewing, was brought to Tripler, and our head and neck surgeons and ENT surgeons of course we treated him (next). Diabetes runs rampant. This woman from Chuuk State stepped on a Spam can if you can imagine, and that was the onset of this. She was treated at home and was restored to health (next). This poor lady wandered out of the jungles of Pohnpei State, thought this was her own special cross to bear, and in fact she came in because of the decubitus ulcer that had evolved, turned out (next please) this was a low grade osteosarcoma. She had a full quarter amputation by our oncologic surgeon and his team, and the amputation line was free of all tumor. She was restored to health (next).

This was a case I was reluctant to accept from Pohnpei state. I thought it was going to be tuberculosis. We brought the patient in with the advice and the consent of our pulmonary consultants, turns out remarkably and in the insets here, the little thumbnails, those are various fungal stains. This was actinomycosis, easily treatable

(next). This shows it's dangerous to be around palm trees. That's a coconut husker (next). This little three-year-old fellow slipped and fell when the community gathered around the husker, and you can see that little laceration there. That caught his trachea (next). And he developed massive subcutaneous emphysema. We brought him here, did the tracheostomy, let the air dissipate, it was closed, he was sent home, he was restored to health, but this is the most remarkable CT scans. Wherever you see the black is air, so he even has an air myelogram from the subcutaneous emphysema (next). This little girl was taken care of, she fell out of a second story window in Pohnpei state, it's got to be the only building with two stories in Pohnpei, nevertheless she fractured her femur and then these images were sent. I had several more, but the fact of the matter is our chief of orthopedic surgery happens to be a pediatric orthopedist, he looked at these, looked at the fracture, said he didn't like the position of her leg, that it needed to be more abducted, that what was under the heel, whatever if it was canvas it needed to be cut out and increase the traction. All that was done and the position of the fracture was brought into much better alignment, and we saved a huge amount of money trying to evacuate this child. Incidentally, they must all come on American flag carrier, and that in this part of the world means Continental Micronesia, which to many of the jurisdictions only flies in and out of once or twice a week, but it's been a remarkable story (next please). This is just because it was such a medical fascinoma. This lady from the Marshall Islands had this breast tumor. I was concerned because the referring physician said she had a mental condition, and oh by the way we can't keep her stable without infusing her with glucose. Very, very concerning, because I knew that could she give informed

consent and all of those issues, anyway we brought her here, this tumor was removed. It turned out it was a phyllodes tumor, it was an insulin secreting tumor, and her mental condition had come from her severe hypoglycemia to the CNS that she had suffered some years before. Remarkably, when the tumor was removed the hypoglycemia went away, and she was at least from that point of view was restored to health and returned to the Marshall's (next please).

And all along as each of these cases is added, we're able to follow their demographic data from whence the patient comes (next), patient ages, gender, to which department they're referred (next please), and then even by month and so forth. It's a wealth of, no question about it, a wealth of epidemiologic data, both from the standpoint of infectious disease, and I haven't even begun to show you all of the infectious diseases we've seen, all of the tumors and so on. And with that I think I've used up time. Thank you.

**COL Takafuji:** Thank you very much Don. Well, I think you can see this has been just a tremendous experience for us, not only in supporting our training programs, but just in terms of having the satisfaction of providing care to a population that really doesn't have access to care. It's a program that needs to obviously be continued, and is a program that goes very far in terms of good will for the United States and the whole region, and it is one of our really outstanding things. Using technologies that are relatively simple, using the internet, but yet being able to deliver care and address the issue of cost curtailment. With that, I thank you very much and I open it up to any questions you may have.

**Dr. Ostroff:** I want to make a comment as one of the physicians who worked for two years at Pohnpei state and used to back in the 80s and used to refer patients to Tripler, how much that we appreciated having the resource of Tripler available, and you can't appreciate enough how difficult it was to be in such an incredibly isolated place, and this was back in the 1980s, where if we wanted to make a long distance phone call, we had to go up to the satellite station to be able to do it, because we didn't have telephones. Just to be able to do that, to be able to refer a patient, the plane ride from Pohnpei to Honolulu is 11 hours, and a lot of these people were not well, and if we had to send them on a stretcher it was seven seats on the commercial airline that they would put the stretcher across and that would basically blow our referral budget if we had to put someone on a stretcher so we didn't do it very often. But the one thing that culturally is very difficult in all the Micronesian jurisdictions is people really have difficulty if they think that their loved one is going to die if they get sent to Honolulu, and so the worst thing that can happen in Micronesia is to die without your family there, and so it was very difficult for us if we had someone who was really sick to be able to send them off island, so having the telemedicine capacity I think is probably a tremendous improvement.

**COL Takafuji:** I agree with you 100 percent, and I'm sure Don will agree with that too, because there have been patients that frankly we could have provided care to, but we elected not to have them sent to Tripler for that very reason. There is an issue that I did not address here in some of the programs, but it has to do with this whole area of alternative medicine and cultural awareness and the impact that culture may have on health, tremendously under-evaluated area, but clearly here again

going back to the ethnic diversity and cultural diversity issue is of something of growing importance and concern that we have here. Hawaiians have a way of looking at health; Asians have a way and different cultures of looking at health. These are things that in western medicine we are now just trying to get a hold on, but they clearly have an impact in terms of overall wellness of an individual, so this is of course one of our continuing future concerns.

**Dr. LaForce:** Yes. Elizabeth?

**Dr. Barrett-Connor:** I just wondered whether there were any prevention programs with regard to tuberculosis.

**COL Takafuji:** There are no programs that the Army has right now here at Tripler that are specific to tuberculosis. Part of that's because we have no special funding for tuberculosis programs. Could we do it? Absolutely.

**Dr. Campbell:** I went to the University of Hawaii medical school and we were sent down to Truk as part of our training. I know UH has an initiative to go down and provide health care down there, so I'm curious as to how your program fits in with UH's.

**COL Takafuji:** The two programs are not integrated per se, although there is a lot of cross-over and there is communication, and one of the things that we plan to do in the future is indeed try to bond the two programs together in a much more effective manner. The biomedical research center and the technology center that I alluded to earlier is another way to bring the two entities together, so that is a concern that we have, some interest that we certainly do have, so that we can cross-leverage our resources.

**Dr. Alexander:** Yeah, I had a question. The Congressionally appropriated funds for military telemedicine activities that go to Fort Detrick, are you part of that endeavor as well?

**COL Takafuji:** Yes, the way that GEN Adams and GEN Parker, the commanding general of medical research and materiel command have worked this out is that a lot of the support in terms of the management of the Congressional funds that come into the Army would be managed at Fort Detrick in their P6 dollars, so they would be managed at that level, and then of course if the programs are specific to Tripler then those dollars would come out here. We have had a center really dealing with telemedicine funded research here, that we've been sort of managing programs here, but that is a process of a future evolution, figuring out where we're going in terms of the next step, so that's partly the continuing discussions that GEN Adams has going on with GEN Parker at this time.

**MG Adams:** We have fragmentation in the Department of Defense when it comes to telemedicine initiatives; in fact there's no one, Health Affairs, which traditionally manages out programs that have relevancy across the service, doesn't deal with telemedicine per se. They do deal with information management, information technology, and of course in this day and age it's very hard to separate telemedicine from the information technology arena, but services are first of all left on their own, and even in the Army we have the MRMC initiatives, we have the Tripler initiatives, and then we have the Center for Total Access that's down in Augusta at Eisenhower Army Medical Center, plus we have the AMED center in the school from a doctor and a training perspective has an interest in this, so we're just in

the process right now among the GO's and the Army is saying ok let us put something together, because this is not in the best interest of either Army medicine or military medicine as an entity to stay this fragmented.

**Dr. Alexander:** Well it also, it makes such a powerful argument for the utilization of the evolving technology, much more so than some of the applications that are ongoing stateside. It just seems logical that there would be a greater investment.

**MG Adams:** Yeah, the military has a need for it, because of the time distance and the mandate to provide the same level and scope of services and quality of care worldwide, so if you can't take the health care professionals to the beneficiaries, we've got to find some way to bridge the gap.

**COL Takafuji:** Well certainly the Armed Forces Epidemiological Board is in a very influential position to help the Department of Defense influence some of those decisions, so certainly positive words or guidance from you would be I think well received. The whole purpose of you having your meeting here is to recognize what a unique opportunity we have here to do, not just what we're doing now but to do so many things in the future, and you see over 50 percent here of the world, but now when you connect it with the rest of the places where we have military engagements you can clearly see where the gain would be.

**COL Diniega:** I have one comment on the telemedicine and then I have a question on the Pacific Islands, but the comment is that I'm not too sure if you brought up the ongoing ACTD that CINCPAC is running as a way to demonstrate how to use it in the deployed forces, but my question though is that with all the great



work that the university and Tripler is doing with the Micronesian medical facilities and medical programs, one of the biggest problems down there, though is their infrastructure and structures. Their hospitals, as you well know, are not up to speed, nor are there supply systems. Is anybody taking a look at the basic infrastructure in trying to help the Federated States of Micronesia?

**MG Adams:** Well the State Department is, and it's difficult from a political perspective because of the desire for those areas to remain independent, and we tried to leverage what money we are providing from the fed, from the US government in order to direct their needs, but it is not working. In fact there's a hospital on Ebeye that has been under construction now for about three and a half years that the money essentially disappeared. It was there at one point, the money went away, the building is now sitting there not finished, essentially deteriorating in the elements. And we recently sent a team out to Kwajalein, which is right next door to Ebeye, and Ebeye is important to us from a military perspective because 10 percent of the population of Ebeye works at Kwajalein, so from a health perspective we have a vital interest in maintaining their welfare. We want that hospital built, so we sent the team, the facilities planning team, asked them if they would wander over to Ebeye and offer to help, which they did and were able to document that it's still a problem. But it is, it's just not a matter of identifying what the need is; it's working through the cultures and the State Department sensitivities and the government responsibilities in order to do it. To me it would be ideal to partner with Ebeye. As a medical center here I've got a military need in Kwajalein because of the Space Era Missile Defense Command, and to say hey there's great training opportunity, meeting the

humanitarian objective, but right now it's, the politics of it just don't allow it to happen, and most of the politics being internal to the, to those territories.

**COL Takafuji:** Tomorrow you'll hear more also about the Department of Veterans Affairs and some of the joint venture efforts that we are having going on, not just in terms of trying provide care to veterans here in the Hawaiian islands, but also in terms of veterans wherever they may be. And there are some projects or some proposed projects that GEN Adams is looking at with Mr. Burge. Mr. Burge is the regional director of the Veterans officer, the Veterans Affairs office here, and looking at places where veterans that have retired to the Pacific are also located, because the Veterans Affairs has a responsibility to provide care too to that operation. Again looking at cross-utilization of resources.

**Dr. LaForce:** Thank you.

**COL Takafuji:** Thank you.

**Dr. LaForce:** We should move on. The next major topic is one that has been of particular interest to the board. This is the whole issue of the chlamydia updating, of chlamydia screening. There will be a series of presentations, beginning with COL Ben Withers.

## **CHLAMYDIA UPDATES**

**COL Withers:** Which one are we using? Good morning everybody. Again I'm COL Ben Withers, Army representative to the AFEB (next slide please). And here's what I'll be discussing this morning. Each of us service reps will provide a 10 or so brief to the board covering the material that is requested, actually. I just passed out our chlamydia policy signed just two days ago by GEN Peak. As you see it was

just signed yesterday, and here's what it says, in essence. To get this thing off the ground, we're going to adopt a phased approach and to quickly get things going, we are, and to meet the intent of the CDC recommendation and the board's recommendation, our policy directs for the short term chlamydia screening for all female soldiers under 25 in conjunction with the annual gynecologic examinations. It also directs that all soldiers will be screened for chlamydia in conjunction with any STD visit, and that our MTFs will provide education at that time related to chlamydia. The policy letter does not specify the method that MTFs will use, and this will not for the time being occur during basic training. Now in the future, as you see there, and this will take really programming for money, but with planning and programming, and as we decide on a simple method for screening that is not examination-intensive, in other words something that is self-administered or based on urinalysis, we will move to all recruits, female and male during basic training (next slide).

Now the board requested data on morbidity, and this slide is really just a place-holder. I want you to look at the sheet of people that will take a moment to absorb so I'll give that to you. But it lists all the service morbidity data for out patient and in patients for the three equella disease that we had data on, so just take a moment and take that in for a second. Now as you see the Army does suffer the highest rates amongst the services of chlamydia related pinpoints, and there are some reasons for that, naturally. We have not had a standardized screening policy, and we have been, at least later than the Marine Corps and the Navy in arriving at that. Another possibility is that our recruits come from a slightly lower socioeconomic

class than the Air Force, let's say, and that may or may not be associated with these rates. I'm hopeful that our rates should decrease now with this policy and the emphasis that will come with it, and then particularly as we move to phase two which will be screening of all recruits during basic.

**Dr. LaForce:** Ben, before you go on, is there a way of trying to compare this to, what are the rates in the general population? Linda do you know or Ben, do you?

**Dr. Alexander:** When we look at young women ages 18 to 24 we find prevalence rates of 3 to 6 percent depending on the population studied for chlamydia. One of the reasons I'm concerned, we're not looking at, our inability to check recruits is a limitation here, because it would be interesting to know what's coming in from the civilian sector on acquisition.

**Dr. LaForce:** But we do have data on that. That was studied and presented by Dr. Gaydos, as I recall, and it was about 7 or 8 percent, but it was really geographic, with the highest rates in the southeastern part of the United States.

**COL Withers:** I think your question is incidence of chlamydia infection carriage, which is of course not covered here, but the answer is that various military surveys have varied between 2 and 11 percent, so I think what you said is right on. Did you have anything to add to that, Dr. Alexander?

**Dr. Alexander:** No, I wanted to ask the question, are cost considerations the reason that you're not promoting the use of amplified testing for chlamydia now? In other words, if you had the resources would you test?

**COL Withers:** I wanted to get into that. The answer is yes, in prorating those costs in the FY03 Program Objective Memorandum or POM and that's about

when we plan to move to that. I'll discuss that in barriers in a little bit. Ok. Any other questions on that now? (Next slide please.) The board asked about current screening practices, and as you know we in the Army have had no Army policy. We have for a number of years been obliged, officially obliged to follow CDC guidelines, but we have had no specific Army policy, and perhaps less interest, excuse me, emphasis, in this area than we will have now. As you know we have not, and at least for a while, will not screen during basic training. We do not screen for chlamydia. The question was when do you screen, and during deployments no, we're treatment oriented for out patient complaint oriented disease, a classic disease model. Now at permanent stations, again what are our current practices? I took anecdotal evidence from the field, using email asked a lot of people to tell me what is going on. I took advice from family practitioner and family practice and GYN consultants, and they piped me emails, which I read from their doctors in the field, and I can glean from that what I'm going to tell you. As you'd expect our most recently trained family practitioners and gynecologists, this is emphasized and they're doing it. Our more distantly trained physicians are probably not doing it. Estimates, when I asked the question, what percent of females under 25 do you believe are being screened for chlamydia, the answers vary between 10 and 50 percent by location, and I did note, and this does not bear directly on chlamydia, but I was reading a recent federal practitioner that cited some recent Air Force data that indicated 29 percent of military doctors screen for STDs in encounters with young patients (next slide).

The board asked us to address barriers, and obviously cost is, needing a new program, even though it saves money in the long run, it's like your own 401(k), it's hard to put that money away, even though it saves you money in the long run, we can all relate to that. We estimate the cost at \$1 and a half million a year to run the program the way we like. And we are programming that for the FY03 budget. These are austere times for the SG's, you have to realize that. Clinic time, another barrier always. Some of these things are not news to you, I understand that. Development of lab resources. If we're going to go to in-house testing, which we would like to do, we have to develop that capability, and again that takes money, hiring time, but we're moving that way. Confirmatory testing will be required in some cases; that's a small little issue. We want to have a tracking system so that we can do contact tracing accurately. Our current system is paper based and it's served us for years, but we'd like, we want to move to better and with CHCSII; we will. And we want to track our compliance with treatment follow up and that sort of thing. The electronic medical record will solve our data loss problems; again that's years away. There is a failure of providers, admittedly to take sexual histories from all patients in general. This survey data shows that. Again this recent federal practitioner article on chlamydia that cited that something like 30 or 40 percent, about a third of practitioners were taking sexual histories on young patients and the other two thirds were not. And finally on the part of our patients, there is either ignorance of an asymptomatic disease or embarrassment to mention a sexually transmitted disease, so that's a clear barrier that we need to take the fore and get around. Ok (next).

The board asked us to comment on data availability or limitations. Our morbidity data, what you're seeing here, and I'm speaking for everybody now, comes from two sources: Center for Standardized In Patient Data Repository, which is basically a compilation of discharge summaries, it's very good. SADR, Standardized Ambulatory Data Repository, is mediocre at best. It's a beginning system which is getting better; we're bringing it along, but SADR can take input, any, every clinician who sees anybody on an outpatient is supposed to make a SADR entry, ok. When I see patients in my clinic if I don't do it, nothing happens. I do because I try to be a good guy about it, but if I don't, nothing happens unless my chief or director comes at me and beats me up. It will take anything that I put in it, clinical impression, even if that disagreed with the lab, so it will take what I put in it, which is my best impression at the moment. And when I'm in a hurry, and it takes me about 90 seconds to really negotiate this and try to find the diagnosis I'm after, and sometimes I get flustered and don't put RNP, because it's the closest thing I can find to you know tense elbow, or whatever, you can see where I'm going, but we're getting, we're improving. Again with CHCSII we hope to really improve it. But for right now our out patient data is rocky, and we know that. Lab data are not merged with the SADR at present, and again the input is burdensome for the poor guys at the front line. The input is burdensome and it was in fact one of when CHCSII was tested here didn't fare well because it was perceived by the guys and gals at the clinic as more of an obstacle than a help, and obviously we can't do that, we have to do better agonistically. O.K. final slide I think. We're now at a new period in the Army. I am certain that with our new emphasis on chlamydia we will do better.

We've made a quick start, and we have a plan for a more definitive screen process within the next two years. I think we should let our MTS implement this and then revisit the issue later. We will continue to monitor chlamydia morbidity rates, and I am confident that we will see these rates decrease in the Army. Are there any questions?

**Dr. LaForce:** I think maybe what we ought to do is hold the questions until we get through all of the service presentations and then have a round robin. Dana?

**COL Bradshaw:** Thank you. First of all I just wanted to, I think, say that hopefully this session this morning will be able to get clear up a lot of I think misunderstandings and I think even some miscommunication that has gone on I think on this topic. I think when the Army first presented the question to the board back in, was it '99 I think, that the conversation I think sort of centered around the issue of new technologies that were available to be able to screen, which made it actually much easier for us to think about screening in the recruit setting. And I think somehow we ended up with some miscommunication about really what was going on, and maybe even from the presentations this morning you see that there still is some confusion and maybe I can help elucidate a little bit about why I think there is some confusion on this topic, but I'll go ahead and present kind of what we have in the Air Force, and we can maybe in the discussion session talk about this a little bit more. The objective of course again is here is to respond to the recent letter that the AFEB sent to the preventive medicine officers and the SGs, which is to get additional information about what's going on with chlamydia screening in the different services. Certainly the estimates of disease burden the current chlamydia



screening practices, the limitations of the data we currently have available, and the barriers to screening, the same sort of things that my colleague, Dr. Withers, responded to. I wanted to just give the background. This was discussed briefly earlier, but I just put it back into perspective.

We had the issue with the Gaydos studies and others, the fact that the Navy's been doing screening with the LCR and the recruit populations in the past. Some of the data which is, that we have, is the female prevalence, about 7 percent when we do screening in those populations. Male prevalence about 3 to 4 percent. In the Gaydos study it was 9 percent, and they found that there was a geographic increase prevalence, particularly in folks coming from southeast United States, and other risk factors also contributed to increased prevalence in these populations. So that's just the background of where we've been. The primary place that we get reportable events in chlamydia in particular reported is through the Air Force Reportable Events Surveillance System. This data is forwarded, just as the other services' reportable events data is forwarded to the Army Medical Surveillance Activity, which houses the house Defense Medical Surveillance System, so all these have reportable events surveillance data. From fiscal year '99 we had 3622 cases of chlamydia reported and then '98 there were 3344. Now that includes both active duty and dependents, and later I will get to talking about active duty in particular. The chlamydia reporting rate then is 41.2 per 10,000 person years, and that's based on fiscal year '98 data. This is the same data that LT Jeff Brady at the Defense Medical Surveillance System looked at in terms of ICD9 codes that might relate to chlamydia. I do want to mention that of course there are other causes for these, although chlamydia is

certainly a primary contributor, but pelvic inflammatory disease, infertility, ectopic pregnancy all have other causes other than chlamydia, so we just need to keep that in context when we talk about this (next one).

Now it turns out that these chlamydia reports I want to just mention since the recommendations from the US preventive services task force letters mentioned that our high risk populations, age is one of the surveys that we can use to identify that, so we can look at those folks. So just looking at our AFRESS data, asked them to look at what proportion of these are under age 25. It turns out about three fourths of our female folks that have been reported as having chlamydia are in that high risk age group, so that seems to fit with what we know from elsewhere, although it's a little bit more split evenly with the male population (next slide). Now we have a rather unique opportunity down at our Brooks Epi Center with the reference lab they have down there, because as it turns out most of our testing for chlamydia comes through the Brooks lab, which is serendipitous when we want to look at a question like this. So Jim Neville, Linda Canas as so many of you know from the global influenza group screening efforts, they also have this kind of data on EIA and LCR testing in the Air Force, and because this costs money for them to send it out, they're much more likely to send it to our reference lab in San Antonio to get the testing done, so we capture probably 67 of about 79 or 80 of our potential submitting treatment facilities there at Brooks.

Now just some population demographics. In the Air Force we have 66,000 women personnel. That comprises about 18 or 19 percent of our total force. If you look at the high-risk population, the 17-24 age group, 29,100 of those are in that age

group, so just a little less than half are actually in the high-risk age group. Now the actual number of lab tests that were mobbed down at Brooks for chlamydia tests is 18,573 women. This is for fiscal year '00. So we have 29,000 in the high-risk age group, 18,000 were specifically logged to women. And then there was another group where they did not specify the gender, so that's about 20, potentially 38,000 tests for 29,000 at risk women (next slide). This shows you how these tests come to us or are in the system up there. They're labeled either as female genital sample, male genital sample, unknown (meaning unknown gender) genital sample, urine screen or then there's this large unknown category, so a lot of this depends on how meticulous the person has been in putting that information in when the sample is submitted. When you look at the large aggregate number of tests, which the total number of tests is 43,550, our overall positive rate is 7.2 percent. Now if you remember the earlier slide where we were looking about specific research studies looking at prevalence in the recruit population, the prevalence was about 7 percent. And I would point out that the largest categories here are female genital sampling and the unknown category, and I'll get into that a little bit more later (next slide). If you look at the percent positive rate for testing by category of source you'll notice that about 31, 32 percent of male genital samples are positive, where just barely 5 or 6 percent of female genital samples are positive, and then it's kind of scattered across the other categories (next slide). So when we did this we had one of our residents in aerospace medicine that has preventive medicine interests rotated through the force health protection and surveillance branch, Jim Neville, which many of you are familiar with Jim, is there, and he at the response to this question put one of these residents on the

question looking at some of this lab data, and they looked specifically at 20 bases that have specifically only send their samples directly to Brooks. That included about 20,000 samples, of which there were 1305 positive tests, again with that 7 percent positive rate. And then Chung Siedlecki, who was the resident that was working on the project, surveyed 21 flight surgeons that would be involved with doing this screening at these bases. She was only able to get in touch with 10 of them, that this is the information she got: 6 of 10 said they routinely screen, 2 of them said that they screen high-risk only, but not necessarily specifically by age group, and then 2 of 10 said no specific screening. And then when they correlated the lab submissions with what we had in AFRESS, as you know reportable events are often under-reported, but we got a 77 percent accordance rate, which is pretty good. Now that is a limitation, however. The AFRESS data is certainly under-reported, and that's what we find with a lot of that type of passive reporting. It's also reported rates, not necessarily an incident rate, like you might you get in the study. We also had several large OB GYN programs, when I looked at the laboratory data, that were not represented here. And I'm not sure if that was because their labs were doing the, their own testing in house, which certainly the lab data we have from Brooks, though we think it captures most of our testing, it probably doesn't include all of it, because some things may get sent out, some of them may be done at the local medical centers, and our OB GYN programs are WHMC, Travis, so for instance they may have that capability (next slide).

Some of the conclusions I think we can draw from this, and this is certainly, I'll welcome your comments on this, but I think the 31 percent positivity rate in men

is very suggestive that screening in men is done mainly with men who come in with symptoms, and they probably will not, there is really not much indication to be doing just routine screening in that age group yet, at least there's no recommendations from the USPSTI for that. The low positive test prevalence rate in women is consistent with routine screening done elsewhere, the Gaydos study, the screening that's being done at Great Lakes in the recruit populations. The prevalence rates we're getting from that suggest that that probably is screening. Also the high volume of testing that we have in women suggests that we are doing the screening, and then of course our limited survey of providers suggest that between 60 and 80 percent are doing the screening as recommended currently (next slide). Now I wanted to mention here where I think we had some miscommunication. In the May '99 letter from AFEB it said Army and Air Force currently do not perform any type of universal screening. That was actually true only for recruits, because as it turns out actually in the Air Force we've had a policy since 1995 that we are to do, put prevention into practice, which is to stay in compliance with the US prevent services task force guidelines, so we've had that policy in place since 1995, and that includes the recommendation by the USPSTF to do screening in high risk women, including those under age 25. I should also note that the preventive health assessment that is done in all active duty in the Air Force currently has a question on there that specifically looks at screening for chlamydia, so that there's a check box on their preventive health assessment, which is done on an annual basis that says you should screen for chlamydia in a person that is of this age group.

Now what are some of the barriers to screening? These may be similar to what Ben mentioned, but knowledge and compliance with current policy and guidelines is always an issue. Just because you have a guideline in place and you have a policy in place, doesn't necessarily mean providers are going to do it, but that gets into the implementation issues. Certainly reminder systems can help with that, we have the preventive health care application, we have the preventive health assessment, but those are sometimes limited in their access. Certainly time is always an issue with any preventive service in getting it, and time and resources are issues, particularly in the recruit phase. We don't do pap smears at the recruit level, whereas the Navy does, but we don't have the timing in there, and our people don't deploy immediately afterwards the way they do often in the Navy. I think that it would be helpful if we could do batch urine testing to decrease the cost that you mention. I know that's been done, at least in males, but I don't know if there's any literature that says it's been done in females, but I think we would be interested in looking at that, you know at our recruit stage to maybe decrease the cost. And then of course you need the time to educate these folks as well, because if they come up positive then you need to make sure that you intervene in that way. The other thing I went to mention between the services that may have contributed to the confusion, is that in many cases our health promotion people are the ones that are doing PPIP implementation and services. I served on the PPIP committee, and many of the services represented mainly by their health promoters not necessarily by their preventive medicine providers, and sometimes there's just disconnect there. For instance at the USPSTF the Army representative is a civilian health promoter, not a

preventive medicine doc, and sometimes I think that makes us lose sight of some of these initiatives. The other thing is that the metrics of feedback are not yet fully implemented and to get this loop going and to get people interested in it, they need to see how well they're doing or not doing and to be able to respond to that.

So that gets to the next slide, which is what we're trying to do in the Air Force, and DOD at large. I'll mention that the DOD, VA clinical practice guidelines have done a clinical preventive services metrics to develop metrics for DOD based on the US Preventive Services Task Force guidelines, and included in those is a chlamydia metric, and in fact I have that metric. The DOD STD committee is working STD issues. I know that Dr. Alexander is on here; that I think has the stick on working a lot of these issues to try and improve this, so we've got a working group that's working on those issues. The PHSO Support Office also has a metric plan for implementation that would be similar, and hopefully we're going to try and coordinate that those are the same as the DOD, VA one. Also we have a chlamydia prevalence study trying to maybe replicate the Gaydos study at Lackland, but we need to get funding worked out for that. And also Don Thompson's here and we are working in the Air Force to have a recruit health working group to take up not only this issue, but several issues related to recruit health in the Air Force, and this would certainly be one of the ones that we'd work in that group, and that's going to meet this spring in San Antonio in conjunction with the recruit health symposium (last slide). I just want to credit several folks that helped gather a lot of this information to present to you, including my colleague Vic MacIntosh at AFMOA, LT Brady at

AMSA, Jim Neville and Chung Siedlecki and Scott Hebrink and Linda Canas at the free health protection surveillance branch.

**Dr. LaForce:** Thank you COL Bradshaw. CAPT Yund?

**CAPT Yund:** Well, as soon as we're finished perfecting the image I'll show you the few slides that I have here (next slide). Going to talk a little bit about screening practices and also a little bit about disease burden as this fellow here can tell us a lot about disease burden from chlamydia also (next slide). Our screening practices in the Navy are guided by two directives, both dated 1999. One is our STD clinical management guidelines, which states that providers must comply with the most recent recommendations in the prevention of STDs, and the other document is our annual health maintenance exam for women notice, not an instruction, and what that states is that we are to follow current CDC guidelines for screening of STDs. Kind of general guidance, admittedly, but these are the documents that we go by (next slide). Great Lakes is the single training center where trainees of either sex process through, and all female recruits in process through the USS Red Rover. USS Red Rover is the name of the medical clinic where the trainees get most of their medical care. USS Red Rover was the around the turn of the century, around the turn of the last century it was the Navy's first hospital ship, and they decided to name their recruit clinic after the first Navy hospital ship. So all female recruits receive a complete GYN exam, including chlamydia and gonorrhea with the Gen-Probe test system. Annual exams, single women from 18 to 25 years old are screened also with the Gen-Probe, and married women in this age group are counseled and offered



testing and encouraged to be tested, but given the opportunity to refuse testing (next slide).

This is just the information, the three categories of information that you have extracted on the paper that's been handed out. I don't actually have that data here. I think this is data that you've heard before. Dr. Meg Ryan reported that in calendar 1997 the positive rate for chlamydia among females entering training at Great Lakes was 7 percent, and she's done another look for calendar year 1999 and this time it's 3.3 percent, and what has changed, well we haven't sorted out yet exactly what has changed. I mean I suppose one of the, the ideal answer would be that the population has changed and that there's less chlamydia in incoming female trainees, but there are other less favorable possibilities. There may be differences in the laboratory testing, there may be a number of reasons why this 3.3 percent which seems like a positive, like a good trend, may actually represent some failure in our collection system (next slide). We've also collected a little bit of information from our Navy disease reporting system. The document that is required is the medical event report. This is not just for chlamydia, but for all infectious diseases and other conditions for which there is required reporting in the Navy. This is also calendar year 1999 active duty females only, and in the NDRS system for 1999 we found 447 reports of chlamydia for a rate of 9.4 per thousand per year, and in the Marine Corps 204 case and a rate of about 20 per thousand per year.

Chlamydia reporting is probably better in the Navy than a number of other conditions, because it's a laboratory diagnosis, and the laboratory, and if you have awareness in the laboratory that these things need to get forwarded to preventive

medicine, so I think that we as far as reporting is concerned, chlamydia is one of the conditions that's better reported. There's probably less under-reporting for chlamydia than for many other things, but still I wouldn't try to tell you that these numbers do not represent some degree of under-reporting. And, just the last slide, certainly in the Navy and the Marines Corps (CAPT Schor will talk to you in a little bit), chlamydia infection is a significant problem, but I think based on the policies and the practices we have in place, we're doing what's expected at least as far as meeting the national standards of care for screening for chlamydia.

**Dr. Alexander:** I have a question.

**CAPT Yund:** Sure.

**Dr. Alexander:** Are cost considerations the reason you use Gen-Probe?

**CAPT Yund:** I don't know the answer to that question.

**Dr. Alexander:** Because you know it's not as reliable a test as amplified testing, so it's problematic in interpreting the data when that's the test that's been used. But if it's cost consideration, I certainly understand the differences in cost, I'm just trying to understand why certain things are happening.

**CAPT Yund:** Yes, but there's another system that that's true of also. I can get back with Meg Ryan and try to get some more information about that.

**Dr. Alexander:** In which case one would try to tend to interpret those numbers with caution, given the validity of the test.

**Dr. LaForce:** Thank you. Ken?

**CAPT Schor:** Just some introductory remarks. I did some back of the folder calculations on the way out here to get some sense of how many female Marines

there are, and as you can see on the sheet that Ben passed out, we have about 10,000 female Marines out of a total force of about 171,000 Marines. That represents approximately 6 percent of the total force. My best guesstimate of the total number of female Marines that are age 25 or less is approximately 7,000 of that. 65 percent of the Marine Corps is in its first enlistment, so it's a very young service, perhaps more so than the other services. I am somewhat surprised by the, Jeff and I didn't have a whole lot of time to coordinate presentations, but the reportable events, there's probably less compliance with the reportable events in the Marine Corps, honestly, than there is amongst the Navy. I think Navy ships and other Navy clinics do that reporting better than the Marine Corps, and it's something that we just have to work on. My comments will be somewhat of a behavior, anthropological sort of comment of some unique challenges that we face, but if I could have the next slide, the best news is, just went off the screen, maybe we have a bad connection.

Anyway, the good news is like the USS Red Rover, the Marine Corps brings in about 40,000 recruits. There are two Marine Corps recruit depots; one in San Diego, right next to the airport, which I think is really fascinating, and the other one is at Super Camp Swampy. Camp Swampy is Camp Le Jeune. If you go south it gets wetter near Buford and Parris Island. Seems to be a floating base as you drive in there. The good news is that they have gotten an entire day out of recruit training to address women's health. They basically closed the recruit clinic to anybody but women and health care providers. They now have a designated, set aside, honest-to-God, don't have to roll out all the models of female anatomy on that one day, but they have a

designated women's health clinic. And as you can well imagine of the 4,000 female Marines that go through there, it's a very important thing.

We're also working with a Stephany Bodine at behavioral interventions. They actually do role playing on how do you talk about being sexually responsible, how do you deal with those tough situations that you're going to be placed in down the road, and there's some pilot programs that are going on there to work on behavioral interventions. They are using a DNA probe, that is as of October, and the prevalence rate is about 5 to 9 percent. I think, I suspect that there are issues on what you can find out about the DNA probes probably had to do with probably a convenience issue. They are not that far away from the hospital and the hospital labs, but I suspect that when they started to do this several years ago it seemed to be the most logistically easy thing to do. But I got a chance to talk to Dr. Alexander, maybe there's some neat things that we can tag onto as we like to do and increase the technical things that we're doing.

I wanted to bring out this issue of in-garrison versus what the Marine Corps knows as expeditionary, and Marines can't define expeditionary, that's just their way of life. The commandant actually wrote a four-page article on what expeditionary means to the Marine Corps and it's different than it means to other services, and I'll leave it go at that. But historically, there have been Aid stations. BAS is Battalion Aid Station, GAS is Group Aid Station and FLAS is Flight line Aid Station. Those are funded by the commander of that unit historically. They may get 700 bucks a year to buy, to just do some basic sick health. Those generally don't have the capability to do paps and GYN exams, so mostly the female Marines aboard Camp

Le Jeune, Camp Pendleton and Okinawa go to hospital-owned clinics. Now there's an increasing trend to go away from these Aid stations and move that capability into full blown clinics, fully functional clinics, which is a good move, and that's just happening over the last year or two years, basically those main support bases for Marines. So basically the capability to do the screening is linked to the capability to do pap smears. There are some, there seem to be some variable protocols. Even though we have the women's health notice out, there seems to be some risk factor based protocols out there, and also moving into clinical findings based, are there cervical changes, that sort of thing. I can't say there's a standard of practice beyond a session, and I feel very comfortable from you know recently being in a deploying unit that with STD presentations that a good work up is being done. I feel very comfortable with that (next slide please).

Marines deploy sort of in two basic things. We send units to Okinawa and other areas. Those are called Unit Deployments UDPs, and I think that their access to care, female Marines access to care is pretty good there, because they'll have a fixed base that they operate out of. They'll do detachments from there for short periods of time, but I think they have reasonable access at that point. Afloat may be something of a different matter, and I think this needs to come out, and that is that when you put females on a ship, they don't really like to go to the medical spaces on the ship to get their paps and GYN exams, so they try. There's a Navy effort, and I think a Marine Corps effort for women that deploy with MEWS to get all of that done as part of their pre-deployment readiness work up. It's sort of, sort of labeled in a subsequent slide, sort of a fish bowl effect, there's a lack of objectivity, they are

in very cramped spaces, and even though we like to think of ourselves as fully credentialed providers, there's a sense of discomfort with women sailors and women Marines about getting their annual health care exam while they're deployed on the ship, so it's usually done in-port prior to deployment (let me go on to the next slide).

When I've asked my predecessor in this job, Ann Fallon, is out at Camp Pendleton and talked with them, there doesn't seem to be a big barrier to access for the paps and the work ups. It seems to be pretty accessible service is being provided. Again I raise this issue that maybe the triage to a base clinic that objectivity is provided by perhaps a doc that they don't know is not a bad thing, that's well perceived by the female Marines. And again trying to get this done in a pre-deployment state so that they're ready to go on deployment is an effort, that is an overt effort on their part and their medical, their battalion surgeons part (next slide please). So I think that, you know, standardization, I think may be a little bit more emphasis could go out there, but I think we're headed in that direction. The good news is that I think we get everybody when they come, when they assess into the Marine Corps. And again asymptomatic screening is best done in-garrison in our setting, and I think that we're doing a pretty good job of symptomatic and contact diagnosis and treatment while deployed afloat, so these are my comments.

**Dr. LaForce:** Thank you. Let's close the final presentations. Commander.

**CDR Ludwig:** Good morning again. You'll notice on this statistical, this sheet of statistical information that Coast Guard is glaringly lacking. There are a couple of reasons for this. I assume these data are from the AMSA. They do collect Coast Guard data at AMSA but only for the Coast Guard members who go to DOD

facilities, and it's important to keep in mind that about half of our population, possibly a little over half go to, live in remote settings, where they have no access to DOD settings, and must use the TRICARE remote providers and other network providers, so it's extremely difficult to get any kind of surveillance data on those people. We have 30 clinics in the Coast Guard of varying sizes, only the two at the sizeable training centers, the Coast Guard basic training center at Cape May, and there's a fairly large advanced training center in Petaluma, California, of any appreciable size. The rest of them are kind of, fairly small, and surveillance at all of these clinics that we do, would have available data from is at as, let's say in its infancy in the Coast Guard. Ok. The initial entry screening does occur for females at Cape May, and has been taking place since some time before 1995. Since there's no formal surveillance system, we don't have any aggregate of these data, which is rather disappointing, but the chief medical officer who's there now arrived there in '95 and it was already in place by the time she arrived. However this is not an actual Coast Guard policy, which I hope to change in the coming year. It should be fairly simple to do, and I'll just leave it at that. It occurs on day 2 of training when they have their pelvic exam for a pap smear. They use the Gen-Probe, dual DNA probe assay for gonococcus and chlamydia, and the reason that that's being done is, that test is being used is as far as I know is that's what they started with, and it just has never changed, and I'll address some possibilities for the future in a later slide. The chief medical officer and the commanding officer of the base actually are interested in pursuing some of the, have urine implication, but what I mean is the urine batching for both males and I believe it also is done with females, as I've talked with

Dr. Gaydos, Dr. Charlotte Gaydos, and again I'll address that in a minute (next slide please).

I asked my contacts up there if they wouldn't mind going through the lab results for the last year, fiscal year of 2000. There were 488 chlamydia/GC tests done. Most of these would have been the female basic trainees, but they had no way of separating out those requests that were done for clinical reasons, suspected STD and so on. If we make some really big assumptions we can come up with some information from that, though there were 20 that were positive (aha my symbols got messed up in the translation too). 17 were female trainees, 3 were male, and the status of those male we're not sure whether they were trainees or they could have been permanent party there at the base. Anecdotally, none of them were gonococcus; those all represent chlamydia. So making some big assumptions, we can say that the chlamydia rate is somewhere around 4 percent per year among female recruits, and that does seem to be consistent with some of the other data that we have seen.

**COL Withers:** One important thing, you didn't say for instance how many female recruits went through in that year.

**CDR Ludwig:** I didn't check on that, but I'm assuming that the grand majority of that 488 are the female recruits. About 5500 recruits go through there per year, and if we assume that, let's say about 10 percent are female, it's pretty close. Again it's kind of hard for me to sort out these, and I don't have a lot of time to spend on it right now, but unfortunately, and I also put in a slide (the next slide) for, just to remind us that there are officers who access who are also in the age group.



All of the Coast Guard officer sessions take place at the Coast Guard Academy. This does not mean they're all Coast Guard Academy graduates, but the other training, the various pathways to officer-hood in the Coast Guard are also at the Academy. And they have no routine STD screening, except of course for our, sort of perhaps archaic RPR requirements. Sorry?

**Dr. Alexander:** Indeed archaic.

**CDR Ludwig:** Yes (next slide please). I do have a variety of let's say irons in the fire for STD screening. I have been in the past, and think still will be when I go back, I'm not sure, the STD prevention committee, surveillance subcommittee chairperson, and Commander, I'm sorry, LTC Vic MacIntosh has taken over that in my absence, doing a wonderful job as far as I can tell from the email. Nevertheless, I have in that capacity focused quite a bit on some of these STD issues. I have talked again to Dr. Charlotte Gaydos about doing some testing and possibly educational interventions through a collaboration with JH, Johns Hopkins, and also with the Henry M. Jackson Foundation, another possible educational intervention. The nice thing is that the command up at Cape May is very interested in all of these issues and any opportunities to make things better, keep her medical officers interested other than just doing routine care, she's very excited about, so that's the good news. They also, another piece of good news is that during basic training there are already two hours set aside for just for STD and HIV education. I think that's actually pretty good during a training schedule. The bad news is that the training that they get there really needs some updating, and I guess that's really it, except of course I haven't; it's on hold for now.

**Dr. LaForce:** Thank you. Why don't we toss this open for discussion and comment. First off let me, let me say thank you to all the preventive medicine officers. We realize, I've had discussions and conversations not only with Ben Withers but also with Ben Diniega, we realize that part of this involved a real hassle in terms of being able to get this. The board still feels that this is very important, but I just want to make sure from our standpoint that we say thank you for having gone back and taking the effort to go through and capture some of this information. Ok, let's begin. Linda, comments?

**Dr. Alexander:** Yeah, just a general comment, I truly want to echo...

**COL Diniega:** Can I interrupt? It's very hard to hear when people are behind, so can you just project...

**Dr. Alexander:** Project. I just wanted to thank the services as well. I know this was a time-consuming, labor-intensive assignment, but you know we can't really move forward until we understand and we can define the problem, both in terms of the AFEB and what else might happen to improve the health of military service members, so the request, your response to the request is greatly appreciated. Maybe if I stand up. The other comment that I would have is that you know the progress on the technology side is really dramatic. We are probably within a one to two year framework of being able to talk in very realistic ways about self-sampling for women, with not just chlamydia but other STDs. The platforms are evolving, and I know that there's considerable interest on industry's side in working with DOD as they evolve with some of these technologies, so we might want to think about maybe offline about how that might proceed, because I can see that moving this agenda

forward in ways that might be beneficial to the military, particularly military women. When we think about the issues about their discomfort in seeking care in deployed areas, their own need for privacy in special settings and how this might from a laboratory perspective really facilitate things, as well as give us a better handle on, not just chlamydia, but the other infections that can be diagnosed at the same time. So while this represents just the first step forward, I hope that we continue to revisit the spectrum of STDs with the military.

**Dr. LaForce:** Good. Comments? Questions? Yes.

**Dr. Patrick:** I would second that. I think that the concept of a proactive approach to work with industry potentially to look at self-sampling would be key. Obviously this is something we see a lot of in student health as well and this whole issue of, I notice one of the barriers that was not listed in terms of getting people to do this is really a strong social marketing campaign. We know that people will get things done if they know that it's good for them, and I think that's something that might be important to have, and we also, we're seeing a tremendous uptake in women who are also very uncomfortable seeing male providers, interestingly enough, and I don't know what the status is. It's not just the on-board issue, it's simply do they want to go, or do they want to go and get all their things taken care of. And then consumer demand for all these tests is really, really critical. I have a couple of other questions, and one of the things that was touched upon was the issue of contact follow up, tracing, and I guess I wonder a little bit more, can we take a moment to drill down a little bit deeper into that, what's really being done to track contacts and how aggressively are they being followed, and what happens if they are

a non-military person, how does that impact the health departments. California has just enacted a law that tends to unburden a bit health care providers with respect to just simply treating the contacts of people who have chlamydia, and it's produced some liability issues, but it's at least opened the door a little bit.

**Dr. LaForce:** Who wants to take that on, the issue of contact tracing?

**CAPT Yund:** If I could say about how that's done in the Navy. Navy preventive medicine technicians have many roles, but one of the roles that they see as a very important one for them is to manage that program and to do the interviews and to find out who the contacts are. If they are in the military, then they can contact, if they're in the military or the military system, they can be contacted. If they're not in the military system and there's enough information to be used to contact that person, then the PMT will contact the health department, the local health department. I don't have data at the tip of my tongue to say how near 100 percent compliance we are with this, but I've dealt with preventive medicine departments at a lot of clinics and this is something that I think in the Navy is very well done by our preventive medicine technicians.

**COL Wasserman:** In the Army, it's very similar. We have preventive medicine techs. At Tripler we also have somebody in our epidemiology section who works on that. We all network with the health department, you know to provide information for contact tracing. I don't think contact tracing is an issue. Sometimes it may be if there's a stigma associated with it. In some of the services there's a stigma associated with, you know, having STD, but in the Army that's not an issue.

**COL Withers:** Glen's here because he's currently one of our regional medical PMOs and I want to, I just want to ask you two things, Glen. To what degree do you feel that the input, in other words that the diagnosis, either from the clinician or from the lab gets to preventive medicine? Do you feel that's pretty tight?

**COL Wasserman:** Well, for us it's pretty tight, because we have an automated system through CHCS where we get all the laboratory information on a daily basis, so you know we kind of do it automatically. There's some differences between the medical centers and MEDEXS. For us, the individual practitioners see patients and then we follow up. In other places where I've been previously, preventive medicine did both the diagnosis, treatment and follow up, but that's pretty much how it's done.

**CDR Ludwig:** Can I ask a question? I want to make sure that we're focusing on chlamydia here, because my recollection is that it's not reportable in all states.

**Dr. Alexander:** It's reportable in 39 states.

**CDR Ludwig:** So in states where it's not reportable, I believe from my memories of the Army, which is was a while ago, but that it's not reportable by the state, and there's variable reporting through the military system, there might not be as good a follow up and contact tracing, is that still true, for chlamydia as for other STDs?

**COL Wasserman:** Not for Hawaii, because we do track chlamydia, we do follow it up as one of the STDs. It may be in one of the states where you know where I haven't been located before, so I wouldn't be familiar with those states. I

did have an issue, a question though about the conditions because I'm almost concerned that maybe the people who come into the Army are coming in with chlamydia infections, not getting adequately treated, but what we're, a large proportion of the inflammatory disease or the infertility, ectopic pregnancies, occur several years out, and so could there be a delayed effect?

**Dr. LaForce:** What you're pointing out was a concern that was expressed, been expressed during a couple of the AFEB meetings, and some of this actually is what prompted this, a more accurate...

**COL Withers:** The reason for delay is, it's a huge burden not willing to take on right now. We ceased doing pelvic exams on women recruits two or three years ago, and we're just not willing to go there right now, so our choice is to wait for better technology and let that save the day for us. More techno-based than labor intensive.

**COL Wasserman:** There's something to keep in mind with your recommendations and that is you know where the patients are going to be seen in the Army at least are in the troop medical clinics as opposed to in the hospital, so you're talking about the numbers of people who will be seen. Also you're dealing with issues of men versus women. Why are the women coming when you can do the test in men, shouldn't you be doing them both? Another issue is cost. We looked at this about a year and a half ago when the AFEB came out with their recommendation, and actually it was Jerry Karwacki who I did a bunch of email. We actually looked at the cost of how much it would cost to do extra pap smears. We looked at our current rate over at Schofield Barracks, because that's where the bulk of our female

soldiers are, and it came out to hundreds of thousands of dollars. If you're interested I can give you the exact amount of the female study that we did, but we're talking about a pretty substantial amount of money to do testing on a yearly basis. You may actually want to look at the rate within each of the regional commands and decide based on the risks. When the study in the New England Journal was done it was in South Carolina, which in the civilian sector has the highest rate of STDs, so it's no big surprise if we found a high rate there. In Hawaii, I think our rates are lower.

**Dr. LaForce:** Are they?

**COL Wasserman:** We believe so. Now there's a question of how many people have gone downtown and that came up with the context of this gonococcolitis surveillance program, because our rates of for prolonged resistance went up from 2.5 percent in the state to 9.4 percent over two years. They came back and said, well could this be military? Well, we actually had gotten away from doing the cultures, because of cost issues, and we didn't need to, but now we have gone back to doing cultures and sensitivity. The other thing is how many people go downtown. And downtown in the State of Hawaii they're all looking at the military, so they're now breaking down into Army, Navy, Air Force, Marine Corps, but we suspect for some of the services where there's a disincentive for being labeled as having an STD, their rates may be higher going downtown, but in a few months we should have a better idea of actually how that's broken down.

**Dr. LaForce:** Ken?

**CAPT Schor:** I have another comment about contact tracing. While the PMTs do a very good job when a person presents with STD symptoms, whatever,

they do a great job of tracing those contacts, I think there may be an interesting difference here, if a woman presents for an annual screen and sees here FP or GYN, they're not as tightly connected with the preventive medicine techs. They may not be well co-located, and it may depend on local clinic or local hospital policy as to well, who sees those results. Maybe just the provider sees those results, maybe not, so there's going to be a lot, that's going to be a source of variability as to how good that contact tracing is, and it's going to relate to how that woman assesses her health care.

**Dr. Patrick:** Absolutely, and I think it begs the question, I mean it would be really nice to develop a technology essentially of types of systems in follow up to a positive test, because again this is a dynamic environment right now, and hopefully the barriers are going to be reduced to where it would be relatively easier for people to simply write the script for a partner and get that taken care of, but obviously it varies state by state and practice by practice, which then leads me to another question in its provider intervention, then it's a whole other issue of how getting the numbers, Jim Neville one of our former residents I should say came up with it as a sort of rough sample of providers was not encouraging in terms of what they're doing, that there's variability that exists so it suggests that interventions at the provider level might be helpful.

**Dr. LaForce:** COL Bradshaw.

**COL Bradshaw:** Yeah, just from the Air Force part of the, just so you know in our system the public health officers do the contact tracing, and there is a little bit of a disconnect in terms of co-location between, you know we've seen current



screening, we're trying to get the folks to do contact tracing, but there's certainly is hand off to local health departments when that's indicated and they also will see dependents and other contacts or refer them if they need to the appropriate people to do that the necessary contact. We are rewriting our communicable disease instruction, and actually we are coalescing several ones, including the STD one, and one of the things that we're looking at, and actually we're interested in DOD level in general, doing active laboratory surveillance, which includes all reportable events that are confirmable by a laboratory test result. For instance the problem that Ken identified that the provider might not think to refer them, or might not refer them, the fallback from that is getting a report from the laboratory, which in the Air Force it would go directly to the public health officer so you have two different methods to identify a reportable event and to have it appropriately filed and taken care of. So that's the type of thing that we're trying to institute and then formalize. That happens to one degree or another. The other point I wanted to make is that one of the logistical constraints the screening of the recruit populations is to how tight their schedules are. Any time we want to do an intervention, any time we want to do anything additional in their training, it is like pulling teeth to try and get your time in there and weigh that out with everything else they have to do. So you can imagine it when you identify somebody with a positive STD, then you need to pull them out, get them in, get their contact tracing done, get them treated, get the you know appropriate educational interventions, in which case usually multi-visit interventions are probably better than single visit, those sort of things, you start adding all that in, you've got to figure out how to do that, so a lot of this is figuring out the logistics.

**LTC Riddle:** Dr. Clinton brought up an important issue when he brought it directly to the AFEB on the chlamydia question, he feels very strongly that the follow up for standard care is in the arena of quality management, and that's why this has been proposed as a pilot measure to look at the practice of care within the facilities within the three services. Also the issue of money, you know that - I don't think that really is an issue. We're not going to not do the standard care practice within the MHS you know, money shortfalls are important, but I think we'd close our doors before we don't give standard medical care. And on the issue of certainly charted course, I think it's very important for the MHS to follow national consensus guidelines, and we certainly try to for everything that is not specifically military unique. For example, here in '94 for the national consensus guidelines, under my experience at base level, we implemented the national consensus guidelines for screening in 1994 where I was stationed, so it's very important that we did that because being from the health policy perspective I get 10 calls a week from companies that want to sell their technology, that want us to do this, that and the other, because certainly many advocates in industry, other groups like to use the federal health system to set a standard practice, to implement their particular technology or what not, so I think it's important for the MHS really to stick with the standard care, to use the evolving technology as it comes along, you know I certainly don't think that we're not practicing standard care. Dr. Clinton is going to do a special study on this in addition to pilot that we're doing with the PAPs and with chlamydia but you know all of that is just a standard execution for quality management for standard care.

**Dr. LaForce:** Last comment?

**Dr. Alexander:** I have to comment a little bit on the contact-tracing question. You know it's interesting to step back now and have this arena of responsibility for all STDs. I think in my Army life I was really focused on the bacterial infections, and that's sort of how I saw the world. If we step back and look, our whole approach really deals with the sort of the logic of the bacterial problem. You find it, you treat it, you cure it. And when we've been doing that, we've really excluded the whole viral arena with STDs, and part of our reluctance to even talk about things like Herpes and other virally transmitted diseases, they just seem so overwhelming. I find it amusing to a certain degree that we're still doing these RPRs and we're not even talking to people about Herpes when we have a 25 percent prevalence rate in our young people, so the idea of taking precious resources, human resources and fiscal resources and diverting them to contact tracing when we know there's really a low output to that investment, and at the same time not investing our efforts into you know routine screening when we know there's a high pay off there. I think it's an opportunity for DOD to sort of step back and say, ok we do have to be consistent with guidelines, but let's really be pragmatic about where we're investing our resources so that we can deliver the highest quality of care. The idea of contact tracing of females who are undergoing annual exams, I think you know the literature shows very little utility for that.

{Transcription: Tape 6}

**Dr. LaForce:** The next presentation is from the Armed Forces Research Institute for Medical Sciences, COL Shanks. Colonel.

## **AFRIMS**

**COL Shanks:** Good morning. And as has been said, I'm the commander of AFRIMS. I have a fairly generic briefing here for you, which I'm certainly going to give, but this briefing's for you. I can't say that I know the AFEB very well, but I know you have particular questions, and I'd like to try and address them. My understanding is that you might be perhaps most interested in some of our newer vaccines and anti-malarial drugs that are coming down the way and what the implications might be for future preventive strategies in the military. That's fine, but if you have another question, please let me know (next slide please). Now, AFRIMS and NAMRU 2 are very close counterparts, AFRIMS being in Bangkok and NAMRU 2 being in Jakarta, though we do differ on a few key things, and the biggest one is that I'm part of a Thai Army unit, not co-located, I'm part of a Thai military unit. My immediate supervisor in-country is a Royal Thai Army major general. This was set up this way from 40 years ago, and it's a very interesting symbiotic relationship, but it's very different from what they have in Indonesia. Previously, we were known as the SEATO Lab, started out with cholera, have mostly been known for drug-resistant malaria and other vaccine studies since that time, although we have a very broad menu of tropical infectious diseases that we're interested in. Perhaps the other key difference from NAMRU 2 is, it's not really a difference it's more of emphasis, is we tend to be much more product oriented. I get credit for putting things in a bottle and moving them along (next slide please).

This gives you some idea of the spread of our activities, from Viet Nam to Nepal. Now we do work very closely with NAMRU 2, especially in the Indo-China

region, Captain Corum seeming to show up in countries at all time and all places, but here in Thailand, most of these are our own physical facilities and are not just collaborations. Further west, though it's more of AFRIMS with NAMRU 2 help, and that's particularly true in our largest satellite laboratory in Katmandu, where we're doing Hepatitis E vaccine trials. Our collaborations in Bangladesh are mostly directly with the ICDDR in Dhaka (next slide).

Again this is just my attempt to give you some idea of the breadth of our scientific efforts. In the course of a year I see about a hundred scientific papers and manuscripts that come across my desk to be approved and sent on for publication. In the last year, these are probably some of the highlights, and I just bring them out to show that we do a lot of different things, from HIV, scrub-typhus to global warming and its impact on infectious diseases, and even some of our standard stuff, such as mefloquine-resistant malaria and its evolution (next slide please). One of the things we're most known for and I get the most credit for is vaccine development. Let me try and tell you where we stand on some of these important products, realizing that delays and other encounters are sort of typical when you're dealing with large-scale vaccine trials. HEV is the Hepatitis E virus, enterically spread epidemic in form mostly known in Asia. That's starting just now in the Royal Nepalese Army. The problem is they bring their recruits into the Katmandu Valley, which has no outlet and a lot of them get enterically spread diseases there. We're going to have to vaccinate something on the order of 5,000 men and watch them for at least two years, but we hope to have data for you something on the order of two to three years from now. HIV, particularly clade E in Thailand gets a lot of attention, particularly

media attention. We're fairly far along in our phase 2 trials, and are planning, if that vaccine makes its cuts to start a major phase 3 efficacy trial in the Rayong Chanthaburi region. The numbers as near as we can tell are about an N of about 20,000 and time of about four to five year. These are pretty amazing numbers, and they are actually due to the fact that the Thais have been incredibly successful with public education and condoms. The infection rates in the Royal Thai military draftees is not all that far off what we see in the US military these days, although there is an immense burden of HIV infection that they're just beginning to see the deaths on, but HIV, big topic, but don't expect efficacy data for some years. Dengue. There are two live attenuated quadravalent vaccines, one sponsored by Mahi Doane and Aventis Pasteur and the other by the US Army and now SmithKline, well Glaxo SmithKline. Both these products are in people in phase 1, phase 2, and we're hoping to go to the field in the Kampong Pit area in the two to three year range, depending on how these actually make their cuts. The other vaccines, which I failed to put up there, are oral attenuated schistosomiasis vaccines. Currently the one we're most involved with is a Flex 2A that's being done at the ICDDR. We've walked down the age range and are now giving it to infants, and we're waiting to see if those come about, if we can go onto a phase 3 efficacy trial.

Now that's just the headlines, did I lose anybody? That's going to keep us busy for the next decade, and realistically that's, there's probably nothing that's going to jump in front of any of them, even though we do have other vaccine products going along, particularly malaria (next slide please). Although I talk a lot about vaccines, I'm actually a drug person, and Thailand is particularly known for

anti-malarial drug development and anti-malarial drug resistance. The earlier part of my career seemed to be spent mostly on finding out what didn't work on the Thai-Cambodian border. There is very drug-resistant malaria there. The good news is that within the last year malarone or atovaquone-proguanil has been approved for both prophylactic and treatment use in the United States, and that's coming in the European Union. That's good, but as a daily medicine, it doesn't request a big technical plus, because our biggest problem with soldiers in chemoprophylaxis really doesn't have to do with the drugs per se, but is getting the people to take them. This is a very safe drug, and if it has a niche it will be in a replacement for mefloquine and people who are concerned about mefloquine side effects. Tafenoquine is something we're laying a lot of hopes on. As a drug itself it does not represent an amazing pharmaceutical advance. It's basically a long acting primaquine. If you could take primaquine all the time, you'd be fine. This one however is very, long acting, and I couldn't help but think with COL Warde was telling us about the experience in Sierra Leone that this would have been a very good drug. Right now if you get three doses over three days you have protection certainly for 30 days, probably for 60 days, effect for 90 days and probably 120 days. That's with no further drug given. Now we're not developing it that way; we're giving it on a weekly schedule, but the idea that you could dose your troops before they leave aircraft or ship behind, and if they would be covered it would be very encouraging. The Australian Army is testing this as we speak in East Timor. They've had over 3,000 men on the drug. They don't have a direct placebo control group, but so far they haven't seen any malaria in a place where they had at least as big a malaria

fiasco as you heard about in Sierra Leone. Most of the malaria in the Australian soldiers was vivax, most of it was after return to Australia, and that was in spite of post exposure primoquine. This is, tafenoquine is the long acting one and the real data is what we're waiting to see is what happens when they come back to Australia, go off their tafenoquine. Azithromycin we've used for several things. It doesn't work terribly well against resistant scrub typhus. It does work very well for campylobacter diarrhea, just as it did against shiga bacteria in Africa. Right now our only treatment trial is with Azithromycin quinine, this is a rather small niche looking for people who can't take doxycycline, particularly children and pregnant women, and we're advancing now to Azithromycin artesinate combinations for non-complicated malaria on the Thai-Burmese border. Questions about drugs and what we're doing with anti-malarials?

**???** That would be perfect for the situation we have in Korea with the e-Vivax strain we have there along with the tezoid phase. I mean that would solve a major problem.

**COL Shanks:** Sure you could give it to them, you could see that they take it, took it, and they would be covered. The real reason I'm not rushing out to do a study in Korea is I calculated the N, and unless we put 10 divisions on the line in Korea, I'm not going to have enough men. Tack rate's too low, and that's a good comment on preventive medicine, but we are looking at it in the Thai Army, but because they don't really rotate out of Thailand, our best chance to get a real answer on that is with the tropical strains of vivax coming out of East Timor into Australia. Stay tuned, it should be interesting (next slide). In the realm of diagnostic developments



you can either go downscale and try and get dipsticks or upscale and look at PCR. We try and do both. Ideally we'd like to have sort of a dipstick that you could use for someone who's got a fever from a tropical area and has a negative malaria smear. We're not there yet, but the scrub typhus and the leptospirosis dipstick seem to work reasonably well, but that's a long way from prime time. In terms of something that actually might be licensed we hope, expect, pray, whatever the appropriate verb is, to have a combined falciparum vivax dipstick going to the FDA within the next year. The final trial is scheduled for this year, and if we actually get it off we should have enough to the FDA with it. In terms of PCR and other more technical based assays, we certainly do them. We've been looking at particularly at unknown febrile diseases on the Burmese border and we're finding, not too surprisingly a lot of leptospirosis, scrub typhus and other such infections (next).

Surveillance, particularly global emerging infectious diseases. This program has always given the lab commanders something of a conundrum because if you find something with your screening and surveillance, what are you going to do with it, if it's not connected to your research program? So we've tried to make certain compromises and fits and try and look in areas that are not only convenient to us but have a high likelihood of turning up things of interest. I mentioned the Burmese border, which is seen pictured here, and because of the flux of refugees and other folks across the border, that's a pretty good place to find things right now. We're seeing an intense upsurge in leptospirosis in places where we've looked for it, not found it, and now it's there. I don't know why. I suspect it's a shift in the rodent population. West Nile virus, you know once it got mentioned we started loading it

into our assays and yes, it's probably there. This is based on serology, but it's probably also in western Thailand. Our malaria drug resistance program has got 20 years of data behind it and we continue on with that important work. These other things are sometimes responding to epidemics, sometimes responding to people requesting technical assistance. These are things we're seeing ongoing in our region. Any question on our global emerging infectious disease program? Yes.

**Dr. Ostroff:** I understood that we're getting some influenza samples out of Nepal?

**COL Shanks:** Yes we're trying to, sorry that's such a small program I couldn't fit it on the slide, but yes, we do send Project Gargle influenza specimens. Being in Asia our expectation would be that these things are going to be hitting us before they hit you. Yes, please.

**Dr. Herbold:** Could you speak maybe just a minute. You mentioned your program funded six initiatives, and then the difference with your surveillance efforts that might be, is that funded with different monies, or how does that work?

**COL Shanks:** Well, yes, there is a split in monies, and if you're told to go out and look for infectious diseases of military interest, obviously those things overlap. My problem with the GEIS program is that if you find something, it's not really connected to a research program to go on and find an intervention, so that's not so much a complaint as a statement of reality, so it does tend to color what I go and look for, and what I load onto the machine, and what we say, all right, what if we could find this, is there something we could do about it? That's why we tend to look for viruses that either have at vaccines or could have vaccines or other problems

that could have drug interventions, so most, the vast majority of my money comes for product development and other strict vaccine drug programs. The GEIS I try and use to specifically look for new threats, but it does direct how I look for them. Yes please.

**Dr. Ostroff:** Yes, in light of the comments about the potential that West Nile may be in Thailand and that you're looking at encephalitis, did you do any work to look for the Nipah Virus?

**COL Shanks:** No, that's probably even too political for me. However I do know from the CDC that it's in the bats in Cambodia, and it's certainly in the people and pigs in Malaysia. If you went out and tracked terropus, you'd almost certainly find it, and in my case, that means don't go look at fruit bats (next slide). Just very briefly, we're in the \$8 to \$9 million annual range. This administrative, this is direct product money, this is infectious disease research money, the other is mostly NIH and other grants, and GEIS comes down at about 9 percent (next slide please). We do have nearly 300 people who were hired under a variety of mechanisms. There are only 22 US military. Not shown on this slide, perhaps, and quite important is the 150 US, I'm sorry, Royal Thai Army soldiers and officers which are also part of the unit. Number wise it's a fairly large unit (next slide). Short term future, Thailand's evolving. We need to have more of a regional presence, because a lot of the diseases we are interested in are no longer extant in certainly the Bangkok immediate area. We're trying to build up our molecular diagnostic capacity, such that we can look at other new agents and things that we can't diagnose easily. Tafenoquine is not only being done in the Australian Army, but I'll let CAPT Campbell talk to you about

what's going on in Indonesia. Our big efforts over the next five to 10 years are going to be these vaccines (next slide).

Long term, again hub and spoke, trying to build up some regional capacity. Some of this is with actual people and infrastructure, some of this is with collaborations. Our major collaborations are mentioned there. My conclusion on a lot of this is there's quite a lot of research money floating around due to a variety of interests, and we're trying to capture some of that outside of the US Army for some of these things of mutual interest, such as dysentery vaccines, which the international vaccine institute's quite interested in. Thailand is a very interesting place to be, and is not to be degraded. They are very scientifically sophisticated. There's not a whole lot of technology to transfer, I mean there's some, and there's certainly some vaccines that we're mutually interested in, but within 300 meters of my office there are two vaccine test sites, all with very good clinical research capacity, all up to GCP standards. We're trying to use and collaborate with these groups and push forward more of the vaccines, but it is a slow business. I think I've used up my time. Would anyone like to ask questions?

**Dr. LaForce:** Dennis, could you comment on whether there's any progress at all in terms of campylobacter jejuni vaccines or vaccine development?

**COL Shanks:** My understanding from the WRAIR, where they did get the vaccine into the initial studies done in people was that their initial approach probably wasn't working and they were back in the laboratory looking at a live attenuated version.

**Dr. LaForce:** Thank you. Steve?

**Dr. Ostroff:** I don't know if I should say I was surprised, but the one thing I didn't see on your list of vaccine interests was anything about malaria. I mean I would think that of any place that would need malaria vaccines it would be...

**COL Shanks:** Well, we've certainly done malaria vaccines. To be honest with you, I'm mostly interested in efficacy, and my conclusion is there's not enough malaria in Thailand to do another efficacy trial. It's that sparse. We do primate studies with various monkey malarias, we do expect to go through perhaps a phase 1, phase 2 with the merozoites sporozoa, MSP1 antigen, but to be honest, most of that work has moved to Africa.

**Dr. Ostroff:** The other question I was going to ask is the schiquella vaccine, is it cross-protective against the sub-species, like dysentery?

**COL Shanks:** It will have to be a multivalent vaccine. All the indications are that if you make it for one strain it won't handle another one.

**LTC Riddle:** For your Hepatitis E vaccine how much of a problem do you see with Hepatitis E among US forces, and where do you see a potential market for that vaccine if you can go forward with it?

**COL Shanks:** Well we sold it SV basically on the idea that it would be a trivalent, travelers' vaccine. Realistically that's probably not true. E is basically in a place where people live in their own shit. And hopefully outside of war time that will not happen in the US military, however, the big places that we expect problems would be things such as China after a flood, India almost any time, Pakistan, these sorts of places where we certainly have contingency missions that might go in there,

but in terms of vaccinating the whole force to be ready, hard to say. We need to see how efficacious this vaccine is.

**LTC Riddle:** Ken, have we ever seen a case among US forces?

**COL Shanks:** I'm not aware of it.

**CAPT Schor:** I would just make a comment to the board that there's a very robust discussion at headquarters levels about the content of the military infectious disease research program, and I don't know what the outcome of that is, it is ongoing right now, it is at the flag officer level, and there are some concerns expressed about some of the directions. The Hepatitis E is, just happens to be a good example, and whether DOD should be committing funds to those kinds of product developments without consensus from the other services. The other thing that I would comment on, another concern along those lines is the disconnect between doing epidemiological research that may or may not have a direct tie-in to a product. Many of us feel that that's an important funded, funding line to look at, whether it has to do with a product or not. It looks at threats and identifies threats that we need to know about, so whether it has a direct product tie-in, is in many cases immaterial, at least early on, so I would just say that there is a very robust discussion being held across all the services to look at certain areas of infectious disease research and product development.

**Dr. LaForce:** Would it appropriate to ask that the results of that discussion then be brought back to AFEB at the next meeting?

**CAPT Schor:** I would think it would be. I think it would be reasonably mature and concluded by that time.

**Dr. Ostroff:** I mean I have just one comment at least from my perspective in CDC is that the science that comes out of the military overseas laboratories is second to none, and I mean all of these facilities are just absolute jewels, and I would hate to think that there would be another round of efforts to try to decrease the work that they do. I mean this is where the Hepatitis A vaccines came out of. It's just, I mean these places...

**COL Shanks:** One observation: when I joined the military there were five Army overseas labs; there are now two.

**Dr. Ostroff:** My sentiment from the board's perspectives would be that I mean these places ought to be supported.

**CAPT Schor:** I'm less concerned about quality and more concerned about some issues, is there may be some issues of maybe we can set this money looking at some other threats in some other areas. Looking at limited funding streams and to what is the best bang for the bucks, in general.

**Dr. LaForce:** I don't think anybody disagrees with that. That's how, that's the priority-setting exercise that every single institution has to go through. Research institution, like a clinical institution, like any other sort of group, and I think it really is healthy to have these sort of duke it out a little bit in terms of trying to make sure that missions are linked with what it is that you're doing, but the board has I think has been always extraordinarily supportive of the research activities and the issue of having units hosted, in terms of not only surveillance activities, vaccine development, you name it. Those investments have really paid off very handsomely, certainly over the past 20 or 30 years.

**Dr. Sokas:** But you did seem to suggest that there were efforts under way to attempt to obtain grant monies or additional monies, and I'm just curious because NIH is experiencing such a boom in terms of resources available to it, and if the focus is truly here pure science for the sake of science and information versus whether it's truly meeting military specific needs, I guess the question would be, what's your success rate been in terms of attracting NIH funding, for example, is that...?

**COL Shanks:** Essentially zero, if we're a collaborating agent it's fairly high. The problem with any of these other agencies, particularly the NIH is again who's driving the agenda, and what should be the issues of interests? That's not a simple question, and it isn't, and you know which, are you leaning into the wind or against the wind, hard to say, but yes in particular things where we have conjoint interests with things that are of particular interest to the NIH we're trying.

**Dr. Sokas:** I'm just wondering if maybe there's room then for people in the OD you know to sort of maybe have some conversations and see if you can establish like an MOU or something like that, that would make that slightly easier. I know it's not easy, but...

**CAPT Schor:** Well, you know I think that the issue of the value, you know the value of the research to mankind or humankind or whatever is not a question. But my sense is that these labs are thrown up with military only focus and now maybe there needs to be a broader focus, as I think you're suggesting, I don't know.

**Dr. LaForce:** Actually, why don't we take this opportunity to move on and listen to a presentation from Jim Campbell in terms of NAMRU2. CAPT Campbell.



## NAMRU2

**CAPT Campbell:** Thank you very much, Dr. LaForce. Thank you Dr.

LaForce. Before I start I just want to pick up on something CAPT Schor had said. I handed out, or it's been handed out to I think most of you this, the case for re-establishing, and that's the point "re-establishing" the epidemiological research program in DOD. The military infectious disease program made a business decision in fiscal '99 to terminate funding for an epidemiological research program. It was a specific line, and it's gone now. CAPT Hyams is one of our premiere epidemiologists. He has been pushing to get it back funded for a couple of years, and either out of frustration or just because he's reached his 20, he's retiring this summer, so there really is no champion for it any more, and that's a shame. I would ask that you would take a look at this, and I know in a sense that I'm preaching to the choir, but please look at this critically. This was his brief to MG Parker and to the Navy flags to try and get this back on line. He did not carry the day, I am sad to say, and I don't know whether it's because of some flaw in the brief or there's just not enough money or what, but the issue of product-driven research is the mind set and it's not perceived that epidemiological data are products, it just does not seem that way, and so I think the people sitting in this room may have a different perspective, I certainly do, and I would ask this board of influential individuals to take a critical look at this, and in your capacity as the AFEB if you can speak to the powers that be, as I will try to do from my lowly position 13,000 miles away in Jakarta, to try and get this back on track. These are data, these are products, just the same as the

vaccine, and for the points that CAPT Schor made and COL Shanks made, so enough of that, but I just wanted to ask your support on this glitch.

Some of the take-aways that I've handed out to most people, just a brochure of NAMRU because I'm not really going to go into the detail that COL Shanks did about his program, so if you want to read all that NAMRU does it's in there, and you can talk to me later. This booklet, at least the board members have it, it has my presentation, a hard copy at the beginning. At the end it has a presentation on our early warning outbreak recognition system, which I won't be talking about today, but I can certainly talk to you about it, and in the middle are some of our current reprints on our surveillance type research in Indo-China. The two presentations I mentioned are also on the CD that some people had, so that's enough of my take-aways. Ok, next slide please. What I'd like to talk about, and as I said I won't be talking about all the different programs.

We have four major program areas: virology, parasitic diseases, emerging diseases and enterics. I'm going to be talking about our surveillance activities in Indo-China and in Indonesia specifically. The point that I'd like to make is that most emerging infectious disease entities introduce themselves in epidemic form, including new agents, emerging agents and other parameters that you see here (next slide please). And this is all either in the CD or in the booklet, so I'll just move on through there. Our approach in our surveillance area is three-fold: developing a regional outbreak recognition and response capability, developing surveillance models for recognizing disease threats to our troops, and regionalizing surveillance efforts to assess disease trends in southeast Asia. This has been important, the

regional concept, because, first of all when Dennis arrived a little less than a year ago, he and I agreed that we were going to work as a team, the Army and the Navy as kind of a, what a concept, but we're going to do this, we're going to work together in southeast Asia as one research, because we each have our own strengths, and then trying to look at the region, because mosquitoes don't know borders and this sort of thing, and so what happens just across the border in Cambodia affects Thailand, so you have to take a regional approach to dengue control and malaria controlled drug resistance (next). New disease entities tend to overwhelm susceptible populations, naïve people for instance, troops, people having insufficient herd immunity we know what that is and compromised populations (next).

A strategy in the area of outbreak response includes outbreak response training workshops. We've written a booklet—it's twice as thick as the other one you have in your hand here, it's not a booklet, it's a training manual—which subsequently has been adopted by the WHO for outbreak surveillance training. We've taught seven workshops with 25 nationals in each workshop on how to conduct outbreak response efforts. In conjunction with this, we set up laboratory diagnostic capabilities to help identify the causes of etiology of outbreak, once they've determined there is an outbreak. We also direct an indirect offer support to outbreak investigations to the extent that we have the capability to do so. This early warning outbreak recognition system, there's a lecture in the back of the book and on the CD that describes this. This is a system, I won't go into the details, but it's a system software for gathering syndromic data, truly unique that allow for virtually real time detection of an incipient outbreak, and we validated on seven different

outbreaks in the Indonesian region. It's really great system, and I'd love to talk about it at another time. Stemming from this there's a, there was a Bali conference. It wasn't too tough to get people to come to this one in Indonesia. It was sponsored by Admiral Blair, CINCPAC, and we had 135 delegates from 17 nations in the region from China to Australia and from India to the Philippines, so it is quite a big geographic area. And the goal or the product of this meeting was to develop, well originally the plan was a network, a surveillance network, but that seemed a bit ambitious, so we came up with a framework for a network, and over the course of several months since last September it has actually evolved to our vision of a network, Southeast Asian Infectious Disease Outbreak Surveillance Network SEA NET. And it has, it's actually taking form, it's going to be the website we based in Singapore, and I can talk to you about that. Actually I'm doing a lecture on that at the University of Hawaii tomorrow at 3 if you're available or I can tell you about that, about our SEA NET (next).

Strategy too on the models, we do pre and post screening of various groups of people who go into threat areas, threat in terms of infectious disease. The military supports the joint task force for full accounting, individuals who go on the look for remains of Viet Nam veterans. There's also de-mining operations, and COL Shanks is very involved in both of these, but the object here is to take people before they go into an area, draw blood from them, and then when they come back out after several months in the area draw blood again and look for exposure to organisms in the area, so it provides data that is quite useful in public health individuals of that country, and of course the military, both the individuals themselves and also to the operating

forces, what threats are out in northern Cambodia. The Singapore Defense Force, military humanitarian operations, we're working with them and in several projects. Some of the stuff that's being done up in Nepal with the Gurkha troops, that was originally done with CAPT Corum from our group and AFRIMS. Also we have this EWORS system that I mentioned, early warning system, we now have it on a palm top platform and it's currently being tested in East Timor by the Singapore Defense medical people to see how it works in a field situation, that one that I mentioned the last one here (next please).

Now in the area of regional surveillance we have several accomplishments, I guess what we're looking for, recognition of vibrio cholerae in Indonesia, the important causes of interrent disease in Indonesia and recently in Cambodia, important causes of hemorrhagic disease in these countries, and somebody mentioned Nipah earlier, I'll talk a second about this, but coordination of Nipah Virus throughout the southeast Asia (next please). Some of the accomplishments in the area of outbreak response. I mentioned the workshops here. First time diagnostic capability for serological and individual culture-based detection. Many of these countries, they did not have this capability and we developed it in their laboratories in their point of health institutes. The lab that COL Shanks mentioned in Phnom Penh, this is basically a CINCPAC funded, or at least they gave us the seed money, at the national institutes of public health here to start this lab. Dennis and I have agreed to think of this as a joint platform, so in the southeast Asian region we use this as a base from which to launch expeditions in the region and also to do diagnoses with an increasing capability first virology, excuse me, first microbiology,

then virology, and on and on. So it's a wonderful opportunity in the city of Phnom Penh to have a staff with an American virologist and eight Cambodians and one other American to do the, really the first quality research in Cambodia. We also have operations in Laos and also in Viet Nam (next please). This was the opening of this lab, the national institutes of public health NAMRU lab, this is Ambassador Wiedemann, the American ambassador to Cambodia, Dr. Hong the minister of health of Cambodia, Admiral Blair and Dr.?? the under secretary of state for health. So all these big guns came out to the inauguration of this laboratory (next please). Ribbon cutting ceremony, lots of smiles. It was done in the mud—I felt really bad about that, it was a nice park but...Here's Admiral Blair looking at a malaria slide (next) and gingerly examining our cholera. He didn't know what he was getting into, he really wanted to put gloves on. I guess I should have, probably not a good photo having a four-star wearing no gloves (next).

For some of you who have worked in the field, and I imagine many of you in this room have, know that this is just a day in the life during the rainy season and they're trying—this is a four-wheel drive Toyota Land Cruiser (next please). We got it out, I mean I say we, I wasn't in on this, this is the joint task force people, that you can see that this is just one of the things you do when you work in the field (next). Oh this is another one. We had a truck that was stuck in an area, so we sent a bulldozer into pull it out, and the bulldozer, I don't know what a bulldozer weighs, 6 tons or 8 tons of steel, had to go across a shallow creek. The bulldozer got stuck, and you can see this cable, we had it in vain tied up to a pick up truck trying to haul 8 tons of steel out of the mud. This was two years ago. The bulldozer's still there and

it's never going to leave, we just gave up (next). This is another reason you don't want to be in the creeks up there, because these denizens are there all the time, and they get pretty big. Here up on what they call MacArthur Hill on the eastern part of the united, excuse me of Irian Jaya, it's where MacArthur had his command post at the end of World War II and this bay in the background is filled with Navy warships in '44 when we launched the re-invasion of the Philippines, that's an historical site there. I mention it because Irian Jaya is where our major field site is, our major malaria site, and unfortunately because of the problems there right now, we're not really allowed to go in there, we're hoping that will rectify itself, but it doesn't look good at this point though (next).

One last slide, when you go up to a field site you eat what's available and CAPT Hibbs, my boss here is eating some more reasonable, eggs or fish or something, but I had paid attention to a woman who was selling this product called sagu out there, it's the core of a tree, and it's a very high carbo, low nutrition, and the people are just chronically undernourished because that's all they eat, so I went to try it, you know a tablespoon of it or something, and she was so pleased that she came back in about an hour with two gallons of it for me alone. I tried it with sugar, I tried it with fish sauce, and just it's kind of like snot but not as tasty (next, next). This is Mr. Ponomo. He's arguably one of the world's best malaria microscopists, without question. Here you can see he's working under typical conditions with a flashlight. This man is so skilled at malaria that all the big institutions, the Pasteur, the Rockefeller, they come to him when they've got their toughest malaria diagnostic case. He has that reputation worldwide, and he has over 300 publications in malaria.

He just recently, his latest publication is was a person in Irian Jaya who was found to have all four species of plasmodium in their blood at the same time: pluset, vivax, malariae and ovale and he really wasn't that sick (next please). Just a brief data slide. Mr. Ponomo did the microscopy on this.

This is some serology that was done showing people that have antibodies to malaria following one, two, three, four successive infections, and we document these infection histories. Just a couple things to point out here, as you can see the white is the children, the yellow-green is adults. Children develop a lower, a lower number of the children develop antibodies as they have multiple infections than do the adults. The second thing you observe is that there appears to be a sort of a after about the third infection, it plateaus, you know longer get, I mean you do not exceed about 70 percent of the people, there's always a certain portion in our study who did not develop antibodies, and this was to the antigen we used, which is a merizoya antiGEN A trivial explanation here either under cork or suppressive therapy and they just weren't exposed to the parasite, but this was some interesting observations that I point out in our study (next please).

Some more accomplishments—we found through a long study that dengue hemorrhagic fever which had been coming in a cyclical wave every five years had changed to every single year, and we believe that may have to do with the change in meteorological conditions, and people know more about these things than I do, meteorologists who talk about El Nino and things like that, there may be an explanation I don't fully understand, but we did document the change in the cyclicity. Similarly, we're looking at Hepatitis E in Southeast Asia and found it was



associated with people who live along the river and I think intuitively you could probably come up with reasons for that. This last one is very important to the Navy, obviously. We had our outbreak of Norwalk on a large Navy vessel that affected 40 percent of the crew, and those of you who are familiar with Norwalk, it can be quite debilitating and you can take a large Navy warship offline because of this, and this is of great concern to the Navy, but Norwalk unfortunately doesn't make the cut in terms of study, but it's a big deal, like tuberculosis on a Navy ship, it's a big deal to us. It doesn't make the cut for research funding (next). Some other ones, found that the Ogawa strain of cholera was largely by far and away the type that was responsible for cholera in Indonesia. We did find associations between climatic changes and various disease outbreaks, and took a look at a very, very severe attack of influenza in the stone age people in Irian Jaya that we believe killed as many as 17,000 people a couple years ago (next).

The early warning outbreak recognition system (this is all I'll talk about on the slide, but I have a lecture on it in the back of the book there). The system's a software system to gather syndromic data. It was developed in Indonesia, and we subsequently patented it. It's the first joint US Indonesian patent. It was written in Indonesian for Indonesia. WHO liked it so much, CDC was interested, that we had it translated into English so that it could be used outside of Indonesia. Now we've translated it into Khmer for Cambodia and Lao for Laos. We have 13 hospital sites and a network and three in Cambodia. These are sentinel sites for gathering syndromic data. The data are sent real time, usually at the end of the day, but it could be after each patient, to our computers in Jakarta, where the main computers

have algorithms that take a look at these data for these, in the context of these populations and say, now that's background, that's what you'd expect, or that's two standard deviations out, and it sends out an alert and a process starts so that health interventions can be put into place, so it's syndromic, real time data that's unique to the region. Lots of entries, and we're expanding it (next please).

The SEA NET again, and this is all I'll say is this one slide but it came out of a conference in Bali, and the object is to develop a regional information sharing system that will include, that we can link with other networks and will provide cross border sharing of data. We know all the issues, and in fact, Dr. Ward, the guy from CDC who spoke yesterday, talked about EPI-X, I spoke with him afterwards because I was really excited. A lot of the things that he's addressed, they're ahead of us, you know the security issues, how do you get Laos to share stuff with Cambodia, and that kind of thing. These are important issues, but not unsolvable through computer technology, firewalls and things like that, so I'm going to talk to him a lot about developing our regional network along the model of what CDC has done. It's real exciting. And this is not just a fairy tale. Coming out of Bali it was a dream and a vision, but I gave a talk on it to the minister of environment Singapore, he got real excited about it and told the commissioner of public health to implement the EWORS portion, which is the data gathering portion immediately through the whole country. That was last week, so we're really moving, and they I think it has to do with hand foot mouth disease, which is attacking some of the children there, and in a clean city that's quite traumatic for them (next please).

Well threat models, we have infectious disease profiles in conjunction with AFRIMS in Laos and some of the other work as well, in Nepal and other countries as well. Recognized, suggested evidence of resistance to tsutsugamushi. This was in a group of people, the joint task force people who were on a daily doxy for malaria and seroconverted, so it's suggested from a small study that there may be development of doxy resistant in scrub (next). Just a quick table to show you the baseline of exposure rates of some of these people, Singaporean and Gurkha troops who go to Nepal on R and R, because that's the place you go on R and R, and what you can see, not surprisingly as you get older, as HAV everyone has exposure and dengue also increases with age. Interestingly scrub seems to go up quite high too, so in these troops whether they're getting exposure or not, we're not real sure, but we were keeping track of these exposures (next). This is a shot, a breakdown of Nepal, just to show you that the troops go up there, Dennis is it twice a year or once every two years? How often do they get on R&R?

**COL Shanks:** Once every two years.

**CAPT Campbell:** Once every two years, for six months or a month?

**COL Shanks:** I believe it's six, actually it's six months every three years.

**CAPT Campbell:** Ok. We watch these people going in and out and get seroconversions on these populations when they go in very briefly in six months and these are the numbers. Not really high, but they do get it, they do get the disease, and these are, form the basis for making some decisions about vaccines and interventions and things like that (next). In the regional surveillance we have some accomplishments. I won't go into all the details, just some, there's a lot of disease.

One I'll point out is leptospirosis. I gave a talk at University of Hawaii on Monday about this, because obviously Hawaii is interested in this disease, but we believe it is grossly under reported in Indo-China. There's a lot of jaundice that's misdiagnosed as Hepatitis and other disease we attribute to lepto. Spotted fever group, first time it's been reported in Irian Jaya (next).

Just some of our sites throughout Indonesia from Medan in the west to Irian Jaya in the east. And I wanted to point out while I've got this map up here, in this brochure or this thing I handed about re-establishing epidemiological research program and epidemiological data as product, when you stop that, when stop funding that kind of research, you lose our ability to conduct surveillance across this country as well as up here, but across this country, and for perspective, you may have seen this before, if you overlay Indonesia on America it fits, California to New Jersey, ok, so this is a range of Asia which will be a big black hole if we don't do surveillance for malaria, for drug resistance, for dengue. It's just unbelievable in my mind that we are not using, not considering this a valuable DOD product (next). Hospital based surveillance for cholera, just to show you that there is a fair amount of it, in the city of Jakarta and in Bali they're approaching 10 percent of the diarrhea cases that come in, so there's a fair amount, which is good for us in a sense, because we're starting a large cholera, typhoid and shigellosis vaccine trial in Jakarta it will be 50 or 60,000 people starting today and right now, and there's sufficient incidence of disease we believe to support such a study (next). Just a little time line here of diarrhea, the rainy season the black bars is in the winter (November, December, January), so it's there, there, there, there and so on, and there were two cholera

outbreaks that fell in the winter season, as well as this one which is also diarrhea (all types), and the two cholera outbreaks fell towards the end of the rainy season in Indonesia. Typhoid on the other hand, interesting, is in the dry season in Jakarta (next). Regional surveillance, Nipah virus, we did some work when there was the outbreak in Malaysia, because there's a small but important pig industry in Indonesia, in Island Batang, close to Singapore, 10 miles from Singapore, and they import most of their, export the pork to Singapore, not too many miles from Singapore, but the Chinese of course do. Well, they were worried that perhaps the Indonesian pork was contaminated by Nipah, so they were blocking the export to Singapore, well NAMRU sent an expedition up there and found that there was no evidence, and you can't really prove a negative, but we found no evidence of Nipah, so they were allowed to sell the pigs, basically, so there's an economic dimension, a very important one in some cases. And I at another time can give you examples from Egypt, where I worked or from the Rift Valley and how that attacked that, an economic dimension not just a health dimension (next). Ok, this is the last slide.

Our mandate is three parts or four parts. We are the global emerging infection system, the GEIS, which supports not quite half of our research budget, very different from AFRIMS. The basic, the majority of our money is from MIDRP, military infectious disease, product driven, protocol driven research. Very important so our core, very little flexibility for doing anything else, this is the program that has dropped epidemiological surveillance as a supportable research. We are a WHO collaborating center for emerging and re-emerging diseases, and important we feel, because we've been three decades in Indonesia, and the Indonesian government and

the ministry of health has allowed us to be guests in their country. I think we have a very important obligation to give back to the public health of the country, and we feel we can do that, and at the same time supporting our US DOD needs. So that's all I have. If you have any questions, please, or if you'd like information about these other lectures I talked about, you'll have to talk to me offline or at lunch. Thank you very much.

**Dr. LaForce:** Thank you. Any questions? Steve?

**Dr. Ostroff:** I have two questions for you. One of them is, you know I'm really disappointed by the response to Epi, but I have a little bit of, there's a little bit of schizophrenia going on, because for the very first time this year, all three services, Army, Air Force and Navy are sending active duty personnel to CDC to be EIS officers, and so it makes me wonder what they're thinking that they're training them for, since they're active duty personnel. I thought it was a major break through to get the Navy to finally chip in.

**CAPT Campbell:** That's a valid concern and it does sound a little schizophrenic, but the funding was through the Military Infectious Disease Research Program. This is an Army lead agency and they decide what priorities for troops, and this is not considered a priority for basic, for research because it's not considered research, that's the point. And they don't consider it as a product, and MIDRP is very product oriented as COL Shanks has pointed out, so maybe it's not incompatible to be sending people out to have this capability in the Armed Forces but not supporting it as research. Maybe they're expecting money will come from somewhere else, but it ain't.

**Dr. Ostroff:** The second question I had is maybe you could comment on to what degree your operations have been affected by the terrible problems going on within Indonesia.

**CAPT Campbell:** This is a question I get hourly, or daily. Yes, I'm the commanding officer of the NAMRU 2 out there, and have been out there for about a year and a half. The big problem that we have, is that we have, we had a country agreement which we've had for 30 years but was cancelled in September of last year, and we're re-negotiating that and we haven't finished re-negotiating that. Now the government has assured us that we will continue all diplomatic privileges, duty-free import of our medical supplies and things like that; however, I as a CO feel uncomfortable with that sort of limbo status. That's one point. The other point is that our largest research project is our malaria research project is in Irian Jaya, which is an unsettled area, and as of right today we can't go out there. We can't get permission to travel there, so if we don't go out there, we have to move the projects that we have out there. COL Shanks mentioned our tafenoquine project; we actually or have moved that to an island closer to Jakarta so we will be able to pull off the tafenoquine study. The immunological study of malaria really can't be done anywhere except in the population that's there, so we have a large NIH grant, three quarters of a million, which is going to go back to them if we can't get that launched here in a couple of months. So we have some concerns from a research standpoint for some big, expensive, high-ticket projects, but our lab isn't going anywhere. We're just going to have to refocus, or you may increase our efforts in Cambodia, for instance, in the lab that I have up there with Dennis Shanks. Other questions?

**Dr. LaForce:** Other questions? If not... Yes?

**Dr. Sokas:** Just a quick one. Do you train nationals in the projects that you're doing? What's the...?

**CAPT Campbell:** We have a very active training program. In Indonesia, obviously, we've trained many masters and doctoral students, we've trained, who work for us, who work for the university. We just bring people in, train them, send them out. In addition at our Early Warning Outbreak Recognition System we set up surveillance sites, usually at hospitals, and we train the people, both in terms of how to do the EWORS and laboratory back up for it, so that there's a training component that supports our surveillance package as well. Yes?

**Dr. LaForce:** Yes, John?

**Dr. Herbold:** Just a quick comment. If there's going to be loss of Program 6 funded epidemiological research that, to identify issues that are of military relevance, that just puts a much heavier burden on the Defense health program dollar, formerly Program 8 dollars to have good health surveillance, ongoing health surveillance of active duty and dependent populations, so that the epidemiological data can be generated, then that will give the emphasis on where the military research should be done.

**CAPT Campbell:** Quick comment. While I agree that that's what would happen, I would beg you, I would implore you not to roll over and let this happen. If we're going to have a loss, we have had a loss, that program has been terminated. I urge you as the senior members here to help us fight to get this back; we need your



help to get this back. We've tried. CAPT Hyams, very senior, very respected epidemiologist, unsuccessful. We need your help.

**Dr. Herbold:** Just a brief comment. One of the arguments for doing Program 6 based epidemiologic research is there are parts of the world where we do not have active duty and/or dependent, American active duty or dependent populations, so we need to have collaborative relationships so we can look at what the epidemiology is of a disease and what the potential is. For example, putting at virgin populations where, recognizing that, you think that there's the absence of disease, but actually you have a serologically protected native population, but if you bring in virgin troops, they will be hit. You can only identify those opportunities by doing epidemiologic research on the population on the ground.

**Dr. Barrett-Conner:** I was going to say the same thing. I just wonder whether or not in all the excitement and anxiety about emerging infections, it seems to me that this is incredibly stupid not to be where things are happening. I didn't know this, and I don't know that the general public knows it. The general public of scientists and maybe the general public in general is quite concerned about emerging infections, and has a paper been written by Craig or somebody else to be in a generally read medical journal with the implications of what these kinds of things did do and now cannot do? The world is shrinking and we're all frightened about new bugs, and we've stuck our head in the sand. I think that would be a paper that the New England Journal of Medicine would like, given their...

**CAPT Campbell:** Well, I'm not sure I know the answer to that. I know Craig has written countless epidemiological papers, and he has written some with

this philosophy in there and becoming more strident as he's getting more senior and can get away with, but and of course...

**Dr. Barrett-Conner:** But as a general paper, it would be very useful.

**CAPT Campbell:** This document that I've asked you to look at captures the spirit and the angst of CAPT Hyams. I'm still on active duty; I've got a little bit more constraints on me what I can tell MG Parker, so again I make the pitch that if you can help in that regard I'd appreciate it. I concur, if we can catch Hyams before he goes out the door, or maybe after he goes out, to write something...

**MG Adams:** He can write it now, not after he goes out the door. The other thing that you said, that I thought you said is that the surveillance, the approach to emerging infections or whatever the document is that's patented? I was a little curious about what the patent implied. It's a really good thing, and everybody wants to use it, what did you mean?

**CAPT Campbell:** Ok, I'll share. Again that's the last part of the booklet I handed out if you want to see the lecture I give on it, but it's a software program that we developed for surveillance, for early warning gathering of syndromic data, and we patented it, not because we want to make any money on it, but because we don't want to end up buying it back, the DOD doesn't want to end up buying it back for surveillance later on, that's patent protection, but also it's great publicity, PR with the country of Indonesia, because they're now, it's the Ministry of Health and the Department of the Navy on a joint patent, and that's their first, so that makes them feel real good.

**Dr. Barrett-Conner:** How does one access it to use it?

**CAPT Campbell:** We'll give it to you. You want it, just call me up and I'll send it to you. I'll send you the CD that has our publication, our PR sort of CD, which is on this one actually, you can have this one, I can get more, but if you want to install it at your lab or your office or your facility, we have a team, that will come there and train you people, bring the actual software, the code, because you have to put it on your computer. We'll do that, it's all free to the government. Well, we'll give it to anybody, we want to get it out there. We think it's the best, most unique early warning system available.

**Dr. LaForce:** Rosy.

**Dr. Sokas:** I was just going to ask Steve actually on that, since the syndromic surveillance is so important for bio-terrorism and all that stuff, is that something that CDC is working on with DOD or has a different model or, I was just curious as to whether that might be a...?

**CAPT Campbell:** Well, I can say that we talked to Jim LeDuc about it, but we don't have a formal, and since you mentioned bio-terrorism, I forgot that Singapore has a very strong interest in this, and we're working with them to develop it for that application in Singapore, because being in Indonesia it's politically a little sensitive for us to work on that dimension of it, so we don't but the Singaporeans, it's a real big deal to them, so in fact I'm going to talk to Admiral Wright this afternoon about possible applications in Korea and Okinawa, because we have received some inquiries from DARTMA, which you may know what that is, the Defense spends a lot of money for these kind of things they have a program about

our defense, and they're interested in it, but I'm a little constrained because of my political situation to work that out.

**Dr. Sokas:** Well this is really just a clarification question. Isn't DOD the lead agency for bio-terrorism and, and...?

**CAPT Campbell:** It's a matter of where I am in the world for political reasons the country always worries about military, foreign military operating in their country so we have to stay squeaky clean, and this is not squeaky clean, that's how we...

**CAPT Schor:** The precise answer to your question is for consequence management it's FEMA is the lead agent, and for response it is FBI, so the crime investigation, immediate response is FBI. FEMA is the designated lead agent, and all the special instruction that is being worked at the Pentagon and joint staff right now has FEMA as the lead agent, DOD as a supporter.

**Dr. Sokas:** A supporter. The only reason I'm pushing on this is because it seems as if within that group that the work you're talking about is as you said very important and critical for early warning systems, that the early warning syndromic surveillance is critically important, and I don't know if that's an opportunity or if it's just lost.

**COL Bradshaw:** Yeah, Global Emerging Infection Surveillance System, GEIS, which was mentioned earlier, which is the primary actually funded DOD agency and is by presidential decision directive to have a certain amount of money, not only to do emerging infections within military and overseas laboratories, supporting the overseas laboratories, but for instance they have the, in the national

capital area they have a program called ESSENCE, which syndromic surveillance which has been done in the hospital's lab in the national capital area, and actually the Air Force has not got into this, which I'd like to talk to you about EWORS, called LEADERS, which we're actually going to collaborate with GEIS, now probably should be also collaborating with you, but it's certainly in this area of trying to integrate, like the RAPID detection devices, but also gathering data from you know the hospitals, the clinics, and also the laboratories, integrating that, trying to you know identify this kind of things on early. But, so there's DARTMA funding which is funding several different projects, but part of the challenge in the military as always is cross-talking and leveraging efforts that have already been done.

**Dr. LaForce:** Yes?

**Dr. Herbold:** I have a process question. If we were to make some sort of response to this as a group, what would that be and how would we discuss...?

**Dr. LaForce:** I think that's a closed session issue that we will talk about tomorrow, and I don't think it's appropriate to take it up right now. I will say, though, the board members who've got some memory, if you remember Charlie Hoke's presentation a year and a half ago when Charlie went through what was going to happen in terms of the closure of surveillance sites. Again, this is an issue that's been brought forth, and in point of fact the board responded with, or not responded, but did send a letter and a note of concern over this, so we'll take this up in a bit more detail tomorrow. Although I will point out to the board that no formal question about this issue has been posed to the board, which I think is unfortunate, because this could have been a useful...

**CAPT Campbell:** From what level should such a question be posed to the board?

**Dr. Herbold:** It would come from one of the service PMO's

**Dr. LaForce:** One of the service preventive medicine...

**CAPT Campbell:** Well, I would like to drive that. I know that's not my position to make the proposal, but I would like to talk to people, CAPT Hyams could be available for information, I would like to drive this. Thank you sir.

**Dr. LaForce:** Let's close. John where are you. It's always fun to have John Grabenstein show up, because it's really like Christmas all over again. And I recognize that I now have a new beer cooler to go along with my handy knife, and this looks like something to open the beer bottle, is it?

**LTC Grabenstein:** I hate to, I would never correct publicly the president of the Armed Forces Epidemiological Board, however, there's an issue of nomenclature here. This would be a beverage overwrap comma, insulating, comma anthrax educational.

**Dr. LaForce:** I'm sorry. Thank you very much. We do not drink beer in the Army.

**LTC Grabenstein:** This is a beverage wrench...

**Dr. LaForce:** Beverage wrench.

**LTC Grabenstein:** For opening soft drinks. It may work on containers with other things in them; we've not tested it.

**Dr. LaForce:** I stand corrected John.

**COL Diniega:** I have one comment though on that wrap, now Linda Alexander who is not here and works for ASHA in STD, says that that is called a condom.

**Dr. LaForce:** A condom.

#### **AVIP UPDATE**

**LTC Grabenstein:** I do appreciate the humor, and I readily participate in it, but I think as CAPT Schor discussed with you yesterday, we have a great need to get information down to the privates and to the airman and the youngest sailors, and Coast Guard. These things are durable. The best scene was one where one of the deputy directors of FDA in front of Congress couldn't remember the anthrax vaccination schedule pulled out his pen and there it was (next slide please). So I'm delighted to report for the first time publicly that we have gone over the 2 millionth dose to the 500,000<sup>th</sup> person, and according to CAPT Schor, that may well have been the Air, the Marine Corps that put us over the top. I would never use late and Marine Corps in the same sentence, but there may have been some delayed reporting, but will look at that. But we have now, it's the 2 millionth dose and the 500,000<sup>th</sup> person, and I don't remember what slide I showed you last time, but this archived column may be new to you, and the point there is that we've given 2 million doses to 500,000 people, but the number of people on, excuse me the number of people in the active or reserve components currently is actually slowly falling as people leave the service, and we aren't starting all that many people, so we're now differentiating the protection of the current force from the total numbers of doses delivered by the

program, for what that's worth, kind of incidence-prevalence dichotomy (next please).

You've seen this format before. These are, this is our report of the adverse event surveillance to the vaccine adverse event reporting system (VAERS) and we now have received 1,439 forms, the vast majority of which do not involve loss of any more than 24 hours nor hospitalization, 186 involving loss of duty more than 24 hours, 53 hospitalizations. We send every one of those forms without censoring to a civilian panel chosen by the Department of Health and Human Services, HERSS to be specific, who apply causality assessment to them, and they say that we should consider these events to be certainly or probably caused by the vaccine to be 11 of those 53 hospitalizations, that's and all 11 were allergic inflammation type injection site reactions. 124 of the 186 and you see that most of them injection site reactions, rashes, flu-like symptoms, pruritus, bronchiolitis, myalgia, paresthesia, etc. and then the other as well. As these reports have been coming in, the relevant proportions have been staying the same.

**Dr. LaForce:** Are most of those at the third or fourth dose, or second or third dose?

**LTC Grabenstein:** I don't know. The reports are more likely to be first dose or second dose.

**Dr. LaForce:** For those 11 individuals, those are the ones I'm interested in.

**LTC Grabenstein:** Primarily dose 2, and it's not a very sharp distribution. It's 1s, 2s and 3s, primarily.

**Dr. LaForce:** Thank you.



**LTC Grabenstein:** I forgot to bring copies, but Dec. 15 the HCIP issued its guidelines for anthrax vaccine use. They called pre-exposure vaccination for the military and other select groups for which a calculable risk can be assessed, that the specific verb that was on that sentence was “may be warranted” or “may be indicated”. They did not do a risk assessment as you all have done over the years, and that’s, they do not mean to, they do not intend to direct DOD policy, but certainly we’re amenable to the use of the vaccine by the service. This is available on the internet of course, as all their materials are (next please). This is the anthropology of media reports of the vaccine. This is from Lexus Nexus searching under the term anthrax vaccine from September ’97 to December, and there have been various events that have caught the press’ attention. As we are not giving very much vaccine, we are also not getting very much newspaper coverage, for what that’s worth. Just one of our monitoring systems. It’s hard for us to know at headquarters how big a deal this is around the country, and this is one of the ways that we follow it (next please).

Vaccine supply is our problem. We are awaiting BioPort’s approval from the FDA of the renovated facility. Those time-lines keep slipping. It is a complicated process, and it’s not in my ballpark to make those things fix, but we certainly, I was in two meetings last week with Admiral Clinton and others with a program officer for biological offense and other senior physical training, to figure out what it’s going to take to get that approval finally granted. We have 48,000 doses, FDA released doses of vaccine available, that was last month’s inventory; we’re awaiting this month’s inventory. At current consumption rates our run-out date is October more

or less, and we need more vaccine (next please). So what are some of the initiatives under way? What, essentially the renovations in Lansing, are the renovations of the fermenters and the pots that cook the vaccine, not the packaging and filling part of it, which was the subject of some FDA criticism during November 2000 inspection, so to solve the packaging and filling problem, BioPort has contracted, no BioPort awarded the contract or DOD awarded the contract, I think BioPort ordered the contract to Hollister-Stier, which is an allergen extract manufacturer out in Spokane, Washington. They do the alum absorbed allergen extracts if you're familiar with that kind of formulation. FDA has to approve that use of this contract facility, but that's expected without problem. The long pole in the tent, as they say, is the potency test, and we need to resolve the inconsistencies of the potency test to get stockpiled lots released, to get additional production released, the new production facility approved, and the workers on that issue are Battelle, BioPort, and the Joint Program Office for bio defense.

The Department of Defense went out and did a survey of the pharmaceutical industry looking for interest in who would be interested in being a second source of anthrax vaccine production at the request of Congress and others, and five manufacturers answered positively, and so DOD is now looking at what kind of, what FDA calls cooperative manufacturing arrangements can be arranged. Think of it as a euphemism as sharing the license, BioPort would share the recipe with this other source, but that's not a short-term fix by any means. But even further out is the issue of a new, new brick and mortar government owned contractor operated (GO/CO) vaccine production facility. At the moment the plans have anthrax vaccine

production as one of its priorities. I asked does that mean top priority, and I didn't get a clear answer back, but whether that means the current vaccine, or a recombinant protective antigen vaccine is yet to be, yet to gel, yet to firm up, and there the timeline is even further out. We're talking prioritizations. I don't know whether you'd rather have a second anthrax source or an adenovirus source. Those kinds of priorities have to be made as well (next please).

We have had two meetings now of an Institute of Medicine committee looking from A to Z, soup to nuts, 0 to 60 of the safety and efficacy of the vaccine. Many of these names I suspect will be familiar to people in the audience. Brian Strom wrote the textbook, or edited the textbook, on pharmacologic epidemiology. Dr. Barlow has been very helpful. He is one of the primary sites for the vaccine safety datalink that CC uses for vaccine safety research. There are other experts here in vaccines, Emil Gotschlich--any of you with any history or background will recognize him as essentially the inventor of the enterocol vaccine, is the way I think of him. Dr. Faustman and Cowan are experts in women's health issues, statisticians, epidemiologists of varying stripes. Dr. Metzgar even in manufacturing. And we had the first meeting at the end of October, the second meeting at the end of January. I'll show you some of my slides of some of the things I talked about with them when I briefed them last week. Their next meeting is 17<sup>th</sup> and 18<sup>th</sup> of April. That may be a public session, where they will hear from people who make, want to make all sorts of statements to it. They are expecting to produce their final report by Fall of 2002.

Ok, so these are a few of the highlights of the slides. My charter with them last meeting was to review our, the projects that are under way. The study to reduce

the number of doses, change the route from subcutaneous diam and look at gender differences, is being coordinated by CDC as the primary agent, and then there'll be five clinical sites: Baylor, Emory, Mayo, WRAIR, and a fifth site yet to be named to do this study. The dose reduction part will remove the two-week dose and the 12-month dose, so the six-dose schedule would go to four doses if successful. The partners part is some animal correlates of protection studies and, that's the key issue, and it involves people like Battelle, in the UK and Center for Applied Microbiologic Research and others. So those are the hypotheses. The protocol's being finalized now. Enrollment will come, well hopefully, well the goal would be March, but that may slip, but this is a complicated project and a big one. We still have FDA, the final FDA coordination, they're pretty happy with what they've seen, but have to give the final blessing, still has to go through the IRBs forms. Data collection forms are being developed now, and be about a 1300 person study. From any individual's perspective it would be a 43-month study (next please). We've got a couple of other Epi studies going on to look at adverse event surveillance with regard to the vaccine. I'll mention a few. One is looking at the disability discharge database that USAIRIEM has up at Natick and it probably will be, it will be a power study, probably a matched cohort study, vaccinated versus unvaccinated, but looking at overall and specific causes of medical and physical evaluation boards, the MEBs, PEBs; they have access to Army data and will look at '98 to present. There are about 8,000 to 10,000 medical discharges per year, they tell me, and we'll see if there's any differential rates overall or specific causes vaccinated or unvaccinated, and it's just getting started now. Also, looking finally we have a database of

physical exam data for Army health doctor crew. The Aviation Epidemiology Data Registry or Data Register at Fort Rucker, the intent there what we've set in motion is a matched before after design. These are full physical exams. We'll look about 900 vaccinated aviators and 900 unvaccinated aviators and for the vaccinees it will have to be less than two years before, less than two years after vaccination. To my knowledge this will be the only, other than a clinical trial, the only vaccine safety data that will be able to take advantage of physical examination data in adults, so it should be interesting (next please).

And we are considerably further back because of infrastructure building. This is an infrastructure building project, what we're calling the Defense Women's Health Database Project with the Army obstetrics consultant as prime mover to create a detailed clinical database of essentially every GYN visit, then every obstetric visit and delivery to look at cohort analysis. One thing to look at would be vaccinated versus unvaccinated woman, vaccinated versus unvaccinated husband of service, actually vaccinated versus unvaccinated husband service member whose wife delivers, and then we have combinations thereunto. We need to get the software written. It's not going to be all that hard, because we're basically mimicking prototypes here in Hawaii with the pretty sophisticated program they have here, and in Landstuhl, Germany, fielding then conduct the analysis. We hope to be collecting data in late calendar year '01, and obviously my interest is in the vaccine surveillance, but opportunities for research are endless with that kind of database.

And last time I presented to you in patient, Defense Medical Surveillance Systems analysis of weight ratios for in patient and out patient visits, we have a counterpart effort underway at San Diego and whereas the DMSS was looking at ever never exposures, Paul Sato and Greg Grey and his group at San Diego have used a 42-day time window, and I've hijacked a few of his slides with his permission, which I'll get together (next one). Paul Sato and group at San Diego (and next). This is all active duty service members, '98—this initial data is calendar year '98 (and next one). This is jumping right to his bottom line. These are adjusted rate ratios for the major ICD9 categories. Here's the relative risk of one, you can see some significant depression, but no significant elevations. These are rank ordered by relative risk, so this is consistent with the data I showed you last time. I promised Paul that I would make, offer his available to you if you want, offer his availability to you if you wanted to see more along this line. Both DMSS and San Diego are going to be doing some more stratifications and sub-setting in various ways to see if we can, you know, is there a healthy worker effect, a healthy soldier effect? Can we make it go away if we look at Germany versus Korea deployments or assignments for example, something along those lines to get at what the issue is. We're comparing, it's a complicated issue. Let me stop there and let me see what questions you have.

**Dr. LaForce:** I would just begin by saying that we, we may be well on our way to seeing the most detailed study of a single vaccine ever in the history of mankind. At that point I'll just stop.

**LTC Grabenstein:** I come as sort of the airport traffic recorder for this vaccine, because I don't do the research, but I keep track of it all. We have seven published studies, 13 that are completed and either under review or at press, 15 that are in progress, 16 that are in development and four others. That's 53 in total.

**Dr. LaForce:** When do we say enough is enough?

**Dr. Sokas:** Just to sort of put it in perspective, though I mean the day that it actually has to go into use and people are you know panicking for other reasons, you'll be glad to have you know nice solid data like this, so it will serve a purpose.

**LTC Grabenstein:** A lot of the criticisms, mine and many others, the immediate response is, there's no reason to think that A would cause B, but there's no data. Reproductive, adverse reproductive helps, we don't have anywhere near the quality of data that we need, that we want.

**Dr. LaForce:** I assume the sun is going to come up in the East, tomorrow morning. I don't know that for sure, but I've got a pretty good supposition. And again, obviously we're not at that level of certitude, but I frankly am starting to wonder, when is enough, enough?

**Dr. Campbell:** We're looking at that.

**Dr. LaForce:** Thank you very much. I knew I shouldn't have said that.  
Yes.

**Dr. Ostroff:** John, let me just say before I ask you a question, I think speaking for the board, we certainly appreciate you continuing to keep us informed with what's going on with this issue, and we certainly appreciate your perseverance.

I mean you have boundless energy to keep this very difficult issue. When the remaining supply is so dear, how do you prioritize new vaccinations versus boosters?

**LTC Grabenstein:** In July of 2000 we ceased continued doses, subsequent doses for people in continental US, and we're only vaccinating in Korea and southwest Asia. That wasn't enough of a draw down, and so in November 17 of 2000, we dropped out Korea, so we're not longer vaccinating in Korea. We're only vaccinating in southwest Asia, while in southwest Asia, with some exceptions, small exceptions, but basically we've reduced consumption by stopping all the subsequent doses. So we're effectively delivering to those people in theater three, four doses and saying, this will get you started. And some climbing the stair steps, you haven't gotten all the six steps in the dosing schedule, but you've gotten, but we've gained you some altitude, some antibody growth.

**Dr. Ostroff:** And subsequently, are you then, people who have gotten the anthrax vaccine, are they going to get, stop having to work in southwest Asia because they haven't been vaccinated?

**LTC Grabenstein:** There actually was a headline in the Army Times that said, that implied that we might not rotate people back from Korea, so, which would have caused panic in the streets, I'm sure.

**Dr. Sokas:** Or an increase of side effects from the immunization.

**LTC Grabenstein:** Thinking optimistically, when supplies are restored, we'll phase it back in. We will return vaccination to Korea, then we will catch up the folks who have been deferred and then expand to the other populations.



**Dr. LaForce:** Other comments? Except the, sort of a, again a sense of frustration that it must be driving you crazy with BioPort, you know, and FDA.

**LTC Grabenstein:** FDA has been extremely helpful. I have no complaint, other than their obsessive-compulsiveness with data, other than that.

**Dr. Shananhan:** We're not, right? We're not.

**Dr. LaForce:** Ok, let's close this out.

**CAPT Schor:** Just a comment. Let's all hope that before we actually run out of the 48,000 shots that we have new supply available. There are concerns in the Navy, and I had a one-star general saying, you know, he knows a lot about biomedical research interestingly, saying you know you just kind of lost the faith when you took this offline. You know the fighting forces, you know certainly in the Marine Corps bought this lock, stock and barrel because they saw it as a critical force protection issue. And they understand intellectually why on a threat, why we had to ramp down temporarily on a threat based scenario to conserve precious supply, but you know ramping back up is not necessarily going to be greeted with open arms. As much as people, the leadership trusts the vaccine, it's not a safety efficacy issue for them, it's just kind of a trust thing.

**Dr. LaForce:** Any other comment? Ben?

**COL Withers:** The two studies, the obstetrics study and the flight aviator study, go over the outcomes again. Is the obstetric birth outcome?

**LTC Grabenstein:** People have raised, our number one question in our email question answer service or our toll-free information line is on reproductive health, and its every stage. It's fertility, it's conceivability, it's miscarriage, term,

birth defects, it's the whole spectrum. So with that level of data we can get at each of those points.

**COL Withers:** Is COL Carlson running that for you?

**LTC Grabenstein:** He's, FDA recently asked us to start a pregnancy registry, like one vaccine mirovax, and I was not scientifically enthused about that, because it's it gives you limited answers, but then as I called around to the OB consultants, I found out that he was, he had a solution waiting for funding, a project waiting for funding, so we were answering some things and were feeding him some money and making his dream come true, which answers our questions. And also, by the way, there will be a piece of it that will track the recency of women's pap smears and chlamydia tests or whatever other things you want to toss out.

**COL Withers:** How about the Army Aviation Study, what are the outcomes? I really missed that.

**LTC Grabenstein:** I don't know, because I don't know exactly how the data is coded, but we'll be able to look at dichotomous pass/fail kinds of things or which organ systems had any kind of differential rates. The detailed clinical data is blood pressure and cholesterol, cholesterol's on there, and a few other things. Biologically there's no reason to think that a vaccine would have that effect, and yet when the business of establishing no difference.

**COL Withers:** Sounds like a real fishing expedition.

**LTC Grabenstein:** We're in the business of establishing no difference. People have raised questions on every organ system.

**Dr. LaForce:** You do 20 studies, one of them is going to go the wrong way, and that's the only one that's going to be cited.

**LTC Grabenstein:** We have actually looked at every ICUD code individually. There are 483 of them, and 19 of them have come up statistically significant elevated inpatient and 20 some out patient.

**COL Withers:** I can tell you the reason he used aviators is because they get yearly exams and there is a medical data repository that you refer to, which is good, but it's still a poor use of this.

#### **ADMINISTRATIVE REMARKS**

**Dr. LaForce:** Let's close it out. Ben you've got some comments?

**COL Withers:** Yes, final chance to sign up for the city tour, so in the barge tour, got a couple of spaces left on the barge tour, please put your names down. Lunch today is going to be the same general drill, except our seating area for the 30 ticket holders is not back there, there's an open area on that side of the building I'm told, so.

**Dr. Sokas:** Oh, good. We like that.

**COL Withers:** Go get your meal. Any off islanders, ok, speakers, anybody from off island that's a guest of the meeting needs a lunch ticket and doesn't have one yet, see COL Diniega.

**COL Diniega:** And people who don't have tickets can join us.

**COL Withers:** Yeah, everybody's welcome, it's just...

## **LUNCH BREAK**

**Dr. LaForce:** I've decided that trying to compete with the outdoors here in Hawaii is absolutely fruitless. We'll start this afternoon's session with the ergonomics updates, LTC Mary Lopez. Delighted to see you again.

## **ERGONOMICS UPDATE**

**LTC Lopez:** Thank you, sir. Thank you for allowing me to return. I guess third time's the charm, right? I have a lot of handouts and if I could just mention them very briefly. First is the Powerpoint presentation, which you'll see on the screen, and then to the right of that you'll see the responses to Mr. Bowling's data call to the services. I gave you Army, Air Force and Navy responses to his questions, and I will discuss that in depth during my presentation, and also the DOD ergonomic working group action plan and then the gap analysis with the recently published OSHA standard and for the Department of Defense. So again, you have plenty to read and I hope you enjoy all those materials that I've given you (next slide). As you recall the question before the board in addition to the cost-benefit model we discussed last time is about the action plan, and Mr. Bowling sent out a request to all of the services and agencies in I believe it was August of 2000 to provide a status summary where they are in terms of policy, resources, execution or the recommendations of the action plan, and I believe at the last meeting I provided a copy of this memo to you. In November we looked at a result of these surveys and developed our action plan, which is again what I'm going to be talking about today (and the next slide please).

For those new board members if you haven't heard of the DOD ergonomics working group, we're responsible to act as consultants in terms of policy and program development for the Department of Defense, for work related muscular-skeletal disorders. We are structured under the DOD Safety and Occupational Health Committee and Environmental Security, not Health Affairs, and we have service and agency representatives, including the three major services, Army, Air Force, Navy and Marines, but also DFASs, the finance agency, the logistics agency, Washington Headquarters Services and several: NIMA, GSA, National Security Administration, we have all of those agencies represented, so we have a pretty broad branch group. We've been fairly successful in getting policies published in the Department of Defense. In 1997 was a good one, the deputy under secretary of defense for environmental security published a policy memorandum for all DOD and that was included in the remission of 6055.1. In essence that requires that all DOD installations have an ergonomics program integrated in their safety and occupational health activities, which is significant because we're the only federal agency that has such a firm mandate policy before the OSHA policy that just came out. And we're identifying ourselves as a critical piece in the injury prevention initiatives that are going on in the Department of Defense. We hear a lot about injury related to physical training and other activities, but for quite a large part, work activities have not been included in these initiatives. At any point past basic training, you do have work activities as important contribution to musculoskeletal injuries. So, we are working with the IOIPC on work injury initiatives (next slide please).

So the service response, and they are in front of you and I was just going to hit some of the highlights from them. It's very interesting that each one of the services approached this differently. The Army, for example, went ahead and surveyed 100 percent of their MACOMs and all their installations points of contact asked them where they are. We found some interesting things, and the Army report summarizes that. We do have our headquarters DA letters, so we have a fairly solid regulation in the Army but only 50 percent of the MACOMs have published some kind of policy. Resources was repeatedly identified as an issue throughout the Army. Very few resources have been allocated. We continue to submit inquiry requests but we haven't gotten a lot of attention from the upper command levels. In terms of execution we found some problems in our survey that identified points of contact, it seems that a lot of them have left the jobs and nobody else had been appointed, so again that's a pretty significant issue because we target people at the bases. And then the phase program. We do have a six-phase program that some of the newer POCs said they hadn't received it, so again it's more of an administrative, getting the word out type of issue. We asked them to rank their management support on a scale of 1 to 5. They rated it as a 3.3, so just about average, and then they did address each one of the program elements and we had some limited success depending on the bases. Is anybody else having trouble?

**Dr. LaForce:** It's me. We can hear you.

**LTC Lopez:** Ok in terms of oversight, about 50 percent of the MACOMS conduct regular, structured assessments and then issues. Issues for the Army were that the role between safety and health. Although it's a health related program, many

associates don't have the health assets so they were very confused about who should take the lead, on some bases it was a conflict of who wanted to take the lead, and some bases wanted the other person to do it, do you know what I mean? Some bases said I want it, some bases said you can have it. It just depended on the personality, but again some of the bases, it is a health-linked program. The other issues they had were resources and getting the information out to the field and to the supervisors and units. The action plan you can see on the last two pages of the report, actually it's probably two pages in from the last two pages, because I have the examples of the surveys, so you can just summarize, you can skim the action, I think that's pretty good (ok, next slide please). From the Air Force they do have an interim ergonomics policy which not as strong as the Army and Navy policies. They just came out with the letter from the surgeon general, hasn't been updated since 1998, so that's a big issue for the Air Force. The action plan, they were very detailed with the action plan with a step by step process, but I thought it was interesting that their obstacles that the Army, Air Force, Navy, all of us are facing, that we have an inability to capture data in a timely manner and to identify the direct cause of musculoskeletal disorders.

From the Navy they do have a policy within their chief of naval operations instruction, so that's a fairly strong policy. They've identified in the line side. The execution they have put the responsibility down to the individual command level, which is very appropriate, and they have done a lot of work on pilot studies. Out of all the services the Navy has the most dramatic success stories, primarily in the worker's comp area, but they, this is the only agency that really has some solid agency. In terms of oversight, they do have some ergonomics check boxes in their

inspection, oversight inspections, and then their goals, so they want to institutionalize the program, data comes out again as one of their primary concerns. They're looking at the DOEHRS system, although DOEHRS is running into some long-term development deployment problems, as far as some of their assessment, standardized assessment methodology issues. They do have a 40-hour course, however they are incorporating the DOD template course, so they can deliver it rather than have a contractor deliver it. We're looking at toolbox and then the same design and acquisition issues, which I'll talk more about in just a minute. So, any questions about the services responses? And again, I provided the documents to you so you can at your leisure, here in Hawaii...

**CAPT Schor:** Did you get Marine Corps responses?

**LTC Lopez:** The Marine Corps response was altogether with the Navy.

**CAPT Schor:** Oh it was, ok.

**LTC Lopez:** Are there any other questions? Ok. So in November we took all of this information and tried to synthesize it into a DOD corporate level ergonomics action plan. The first thing that we really dealt with as a group was the role delineation. We wanted to make sure that everyone understood that the ergonomics program belongs to Environmental Security. We are just the ones responsible for implementing and supporting the program. Environmental Security has to take ownership of this program. Our purposes again can be stated to reduce the effects of musculoskeletal disorders to develop and enhance the local plans. So you'll see as we go through this action plan that it's pretty product oriented, tool oriented, and also we have a short-term suspense on some of those metrics that are



listed there because of the OSHA requirement, the OSHA standards driving that, we need to have to make sure DOD is fully compliant with that standard.

**CAPT Schor:** Just one quick question. With the new administration.

**LTC Lopez:** I'm going to get to that.

**CAPT Schor:** Oh, you're going to get that.

**LTC Lopez:** I'm going to get the policies. I'm going to go through the action plan then I'm going to OSHA you'll see. Ok, any questions so far? If you have any please interrupt. I'll be happy to address them. So our action plan. First of all we have looked at the OSHA standard and identified a gap analysis, and you have the document in front of you also. Again I will talk about that in depth. For local policies and plans, we really wanted to look at templates so that we could facilitate their program development and we wanted it to be accessible. The problem is that as we surveyed the installations, a lot of them have plans but they're not, they don't meet all of the requirements, so we really needed to address those issues and make a template that OSHA can approve. One of our big issues was with the OSHA standard. You can see that I repeat this again, that we want to go to OSHA and say bless this so that we have at the corporate level and OSHA approved template for our bases and also the tools that we'll be using. Standardized reporting was again a big issue. Data availability was a big problem for us. The metrics, we're looking at severity rate, and I think that was one of the questions that Mr. Bowling asked of the AFEB also is to address the metrics issue. Severity rate traditionally is addressing lost work time. Congress also looks at the lost work days or rates from the

Department of Labor Data, but we want to expand that to limited duty dates, because that has a direct impact on readiness and productivity.

Now in terms of the data availability, this is a significant problem, and what we are trying to do is work with a Congressionally mandated safety demonstration project and go back and say in order to establish solid baseline data to evaluate the effectiveness of the safety demonstration project, we need to have good databases in place, and the databases that we really need to have a good handle on, are first of all the FCE Claims Data, and the problem with FCE Claims Data at present is that we don't have good denominator data linked to that, so through the DOEHRS system what we would like to see is the FCE download through the ICUC system and to DOEHRS and link that with the denominator data that DOEHRS has from the defense personnel management system in Monterrey. The second thing that we'd like to see in that is ADS data, but ADS data that includes type of profile, number of profile dates and cost data, those are the three things that repeatedly come out, and the IOIPC has also identified this as a big issue. So with this motivation from the Congress, the Congressional project we would like to go back and modify our current data systems. Funding is attached to this so that's to our advantage to go with money in hand to these systems and say we need this to meet the Congressional requirements and we would like to see this evolve into a corporate way of doing business. Since they've moved from the bubble form—most installations have used the bubble form to KTABS—where it's automated, this at least in our minds, should be an easier fix, but the problem we're running into in terms of adding profile dates or profile data is that there are discrepancies among the services in terms of profile.

In the Army side we have a special codes that limit the type of activity. For example, I could have an upper extremity injury and I could still run, so I just have a specific code. From the Navy side, you're either 100 percent or 0 percent and correct me if I'm wrong, but we're having some trouble finding the exact regulation that dictates exactly how these profiles are written. And from the Air Force side there are also some discrepancies. So the services we're finding are not standardized in the way they're writing code so we're running into the problem of how will we go back to KTABS and make that the DOD-wide system. CAPT Schor?

**CAPT Schor:** You know if you're talking about limited duty or light duty, that's always been a provider's right, and it may be driven by you know if you're working on a ship, you can't have a cast and get around up and down ladders and things like that, so it's not proscriptive from a global sense, it's from a medical needs sense. So there are no standards, it's based on clinical judgment.

**LTC Lopez:** That's right. Anyway, so. It's an issue that I hope we can resolve in the very near future because we want to get this thing in place. The other thing we worked on with the standardized reporting is make an annual report requirement to the Environmental Security, so that all the safety and OSHA people who aren't feeding information up to the duty and Environmental Security is one of the checkpoints (next slide). In terms of resources, we really do need to get some upper level attention and upper level support, for this is a continuing issue, and the best way to do it, got to realize we are working on the cost-benefit model and we're trying to get the data in place, but we're talking to resource managers and they have a different mindset than the health community or the safety community. The other

thing that did come up is that we're, there is no ergonomist job series in OPM, which is a problem, because as installations are developing their programs, some installations are actually acquiring funding to hire other people and they don't have any job description to fall back on, and our solution to that was to actually post human factors type job description on our website so they could always pull that off and use that as a template. Acquisition is a big issue, because we are finding a lot of work related problems that could have been solved if you would have addressed it from the template side, from the design side, and I'll show you an example of that in a minute.

So our target is the engineer and the developer training. One of our group members pointed out that we have a lot of senior engineers and developers who will be retiring in the near future, so our hope is that as these people retire, the new ones who come in we can train from the start, so that we establish an appropriate process. Impact card is also a big problem because we have a lot of people who are actually going out and buying things. They've given the option of buying furniture and equipment to the supervisor and so if you had an uneducated supervisor you find that they're buying inappropriate equipment, chairs, devices, and then they have to write refit or replace it before it causes injuries, so Impact card is a big issue. And that is also a training issue. The research agenda: one of the problems we find when we go back to the acquisition side is that when we talk to the developers about problems we're finding we don't have any solid research to fall back on other than the MIL standard 1472 and that research can be challenged. So what we need to do for the corporate level is influence the research agenda, so that these particular holes that

we're finding in our justification can be addressed so that we can again have a legally defensible basis for our issues with the design of the equipment. But this feeds into a larger safety and occupational health issue, because we repeatedly find, not only for ergonomics but for environmental contaminants or gases or other health issues. Our systems are being developed without the soldiers in mind, without the health effects being fully considered, so from the environmental security side they are working for them to make policy changes in the acquisition community, or in the acquisition regulations to address these issues. It goes beyond ergonomics; it goes into all the other health issues.

Ok, so if you can click on this picture. This is one of my best examples; I think some of you may have seen this one already. This is a litter. It's called the Life Support, I don't remember what the acronym is, but they took a common litter and they added all of the things that you would need on an ICU. They have a cardiac monitor, defibrillation, they have batteries to run all of this equipment, so the weight of the litter has gone up to 175 pounds. If you have a fifth percentile female on this litter, most of the people can handle it, but if you put a 95<sup>th</sup> percentile male on this, you'll see what happens in a second. And this is a six person team; this is not a four person team that's actually lifting the litter. This girl actually twisted her ankle in a second and she asked to stop the trial before she goes very far, so again we're just not thinking about the human in our design (ok, next slide please). So to go on, do you have any questions so far? Yes, sir.

**Dr. LaForce:** Can you go back a little bit in terms of the resources issue again? We've talked about this a couple of times. Could you again just quickly review for us where you stand in terms of FTEs or other resources?

**LTC Lopez:** In terms of the Army I think we're fairly well staffed, but staffed on a shoestring but staffed. Our program in the Army is probably funded at between \$250 and \$300,000, and that's all I've got. The real issue is that we need to have, training people at the regional level responsible for the installation program development. The Navy and the Air Force are comparably staffed, though I have a few more staff, and the Air Force has more of a military staff than I do. Is that answering your question? Because what we're really run into, is we can continually submit ergonomics in the POM cycle and I'm not trying to be hard on it, but we just haven't been successful in getting the attention at the upper levels. Yes, sir.

**COL Diniega:** Correct me if I'm wrong. There are a couple of other things that probably should be done. One is, there is no clear cut ownership of the ergonomics initiatives or work by anyone special, you know sometimes in some places, it's the environmental engineer, sometimes in another place it's the environmental health officer, sometimes it's the physical therapist, etc. or safety, so there is on paper an ergonomics program, but there's no full time assets and then it's not designated which specialty truly owns the program.

**LTC Lopez:** And that's part of the problem. A lot of it is, we're requiring that the local commander decide who's responsible for that program, and again because some bases don't have the health assets to support the program, and some bases don't have the expertise.

**COL Withers:** Even at that though, the local commander can randomly decide whether it's safety, environmental, whatever, so there's no networking because at the safety meetings it's not brought up, at the environmental meetings it's not brought up. At AFEB it's brought up, but you know what I'm saying. If the issue always gets dealt to the same player then they have their meetings and they take it up. This is one example. This program languishes in part for that lack of consistent approach.

**COL Diniega:** The other dichotomy is that as you can see, the ergonomics work group is chartered and works for Environmental Security, and yet many of the assets are logged through the MHS, Military Healthcare System. And the dollars it's a different story, where are the dollars coming from, who is responsible for the program?

**LTC Lopez:** Well that's from the big picture, that's exactly what we're running into. The Environmental Security is responsible for policy and Health Affairs is supposed to support them with funding and that is just what has happened. Health Affairs argues that this is a line level program. The line is saying this is a health level program, and so we're not getting funding anywhere, so we're between a rock and a hard place with this. And both are right, because the line is responsible for this program and it is a health program and they have to work in partnership, so we're kind of stuck. Yes sir.

**Question from audience:** At Tripler we have an ergonomic program and I'm on the committee, and we not only support Tripler, we also support Fort Shafter. You know it's really not competing. At Schofield Barracks they've got a huge

program, 12,000 troops because it's an infantry-light and civilians in garrison and they only have one industrial hygienist to support that, so there you know obviously there, there is safety and support for industrial hygiene that education provides for us at Tripler, but it's a different command so you have a commander over at Schofield Barracks you know looking at his emphasis on safety is right now it is more and more directed at troops as it probably should be, and then you have GEN Adams you know who has industrial hygiene and you have a different commander who has two stars also and those things often can be difficult to reconcile when you're talking apples and oranges. I really think the programs should be installation programs like asbestos and lead, because those are the people who have the problem right where they work, they're also the people who put the resources to get fixed. You can tell me what to do, but unless I have the resources to work from myself you're unable to do that.

**Dr. LaForce:** The question I would ask is that why has the Navy been so successful in terms of implementing all of this in, have I said the wrong thing?

**LTC Lopez:** Well, I said they were successful because they did pilot studies. They developed a corporate ergonomics plan, they actually had a contractor come in and do a lot of this work, so it was contractor based rather than integral assets within that command.

**Dr. LaForce:** So why has the Navy failed?

**Question:** So in terms of industrial hygienists, the Navy and Air Force generally have a lot more industrial hygienists, because they are technologically oriented so there's a lot more potential chemistry and exposures and so they're able



to if they have an additional mission to support like an ergonomics program it's not that difficult to spread the wealth, but in the Army in most installations the general has few industrial projects to support the initiative. And in expanding the workload as the commander is, what's now being emphasized with ergonomics is a little bit more difficult to fill the gaps. I mean that's what we're finding with the operation.

**LTC Lopez:** Ok. Any questions? Yes, sir.

**Dr. LaForce:** Just as unclear as it was three months ago.

**LTC Lopez:** Yes sir. The structure is very difficult. The answer honestly is to push it down to local command, at the local command level. Let's see. One of the things is that we were talking about the local commanders owning it and the supervisors being able to access data so they know what's going on in their group and also in safety and occupational health, so what we're conducting is a gap analysis, looking at all of the available data sets, CHCSII, ADS. Now the safety database is pretty important, because it has a richer or deeper quality of data. It includes more cause data and scenario data.

{Transcription: Tape 7}

**LTC Lopez:** Both working groups, IOIPC and the ergonomics working group have identified the need for primary care providers having a good way of managing musculoskeletal disorders because it's a big problem. Ok. OSHA. Shoot. I'm running short on time, so I'll let you, I'll let you just skim that over in the actual treatment of OSHA. Oh, wait, wait, go back one. My big, my other issue is the noise. We know this is a big problem. We looked at the data, for example in the FECA claims data, about 50 percent of the cases and 50 percent of the costs fall into

the traditional ergonomic related muscular skeletal disorders, back pain, carpal tunnel syndrome, tendonitis, but we're having a lot of trouble getting the message up to the commanders and then down to the field level. There is a lot of noise in the field, and I'm sure that you run into that whenever you try to educate the public on anything, how do you rise above the noise level to really get your message across. And again it's a big issue, and I've listed also the target audiences that we're trying to hit and get above the noise level.

Ok. So OSHA. Yes, OSHA is the political issue, and it's been very interesting watching it. In November of '99 they published a draft standard; they allowed a period for comment in November of this year. They published a final standard and it came into effect in 16 January of this year, and all of the requirements need to be in place by 14 October of 2001. Now the Bush administration can do several things. When Bush came into office, he did put a stay on all of the last minute things that Clinton had put into place, including ergonomics, however, because it's a standard it's fallen into kind of a gray area. We just recently talked to OSHA and they said it is 100 percent in effect, and these are the things that can happen. The minute the standard was published, all of the interested parties did file suits in the federal court of appeals, and once that review comes out if they find that there is it's not supported by substantial evidence or some other problems with it, that they can vacate the rule. The interested parties can also file a request with OSHA and the court to stay the rule while this court proceeding is ongoing, and they have done that. We could fall under the Congressional Review Act, but it requires passage by both houses and signed by the president. Now it's a Republican

Congress, so that might help, but... The agency can withdraw an unratified rule and it would and with a Republican appointed head of the agency, that might happen too, and then the new administration can just propose to revoke or modify the rule, but that would require public notice and hearings and can be challenged also in court. As I said it's 100 percent in effect right now. OSHA predicts that at some point the administration will review the rule, but their prediction also is that they'll wait until the OSHA assistant secretary is named and approved before they actually implement this review process. The other important thing that happened with the OSHA standard was published was that ACOM did withdraw their support, and it was based on the medical foundation for regulating this. Do you have any questions so far? Ok, I better wrap it up in about five minutes to stay on time with this.

These are the issues that we found when we looked at the OSHA standard and conducted our gap analysis. We wanted to see both military and civilian populations covered, which we anticipate some upper level management having some problems with that, because traditionally the military is not covered in its finances and resources issues, however, due to the Environmental Security's position is why are we providing a lower standard of care to the military than to the civilian population, so we're hoping that that argument carries some weight. OSHA standard does allow some grandfathering, however, we don't really feel that any DOD program is going to do what we need with grandfathering requirements, especially because of the medical management requirements in the standard. We have to provide employee information by the 14<sup>th</sup> of October. And as we looked at the standard we saw that the employee responsibilities were fairly extensive and we

decided to split the employer definition to the supervisor level and then the local team level. For example, the supervisor, the on-site supervisor, should determine the action trigger, identify the case as a musculoskeletal condition and do a quick checklist to see if it meets the work relatedness part of it, and then refer it to the local team for further action. So the supervisor on the ground should be participating in this process, which leads to an education and training issue for the supervisor. We want to have OSHA approve our analysis tools; in particular we feel that the JRPD (and I'll pass around a couple of these), the JRPD will meet some of the OSHA requirements for both identification of problems and also employee input, because there's some open-ended questions on the back. So we'll be submitting these materials to OSHA. So the corporate level can have that. We also want OSHA to approve the mil standard as a guideline as a design guideline. Musculoskeletal management is a big, big issue with OSHA standard and we've requested occupational health review of that, and also the CPMS, because we haven't seen, although the services in their reviews did have the legal folks review that work restriction protection, CPMS has not, and we feel that this work restriction protection goes against the FCE law. The other problem we had is second and third opinions, because for the military and the civilian we don't have second and third opinions build into the system (let's just go on).

Ok, I've addressed employee training. We have both general and focus training set up, and I think we're in pretty good shape for that. We do require some modifications for the actual tools that OSHA recognize. Ok, program evaluation. We have some standardized assessment items, but what we really need to address is

oversight, and that kind of feeds in with the action plan I mentioned before in terms of oversight. They do have record keeping requirements, which would be incorporated in our technical guides, but DOEHS and Command Corps are going to be key in this process because they can facilitate that record keeping and assessment and actually controls. We are anticipating some slight revisions to our technical guides (ok, next slide). Any questions? So I'm just about on time, I rushed through the end. I know you have some questions for me--you have a lot of things to read--to fill in any gaps.

**COL Withers:** This is an approved survey? I mean, you're sending this out?

**LTC Lopez:** Yes, yes. It's a product of the working group. It was originated in the Air Force. The ergonomics work group took that template and put it on the bubble form, so we do have access to it through their service channels.

**COL Withers:** So you're not sending it out on a systematic basis, because you don't have a whole process.

**LTC Lopez:** No, no, it's a tool for the local installations.

**Dr. Sokas:** I was just wondering if the management commitment portion, which is the number one piece of the OSHA standard has anything to offer in terms of gathering the kind of top level support you need and the command level support you need to do this. I mean, is that already in place or is there a way to use that to kind of get it in place?

**LTC Lopez:** To leverage it? (Yeah.) That then is an option. What we've usually seen from the line side is that, I think they're all from Missouri, is show me,

and they want to see the data that's going to support it, although you said it's an OSHA standard that's requiring management support, they're going to say what's in it for me, why should I do this sampling? So we have to tell us or sell it, from that side. But you're right, it does require it.

**Dr. Sokas:** And for the civilian, the civilian workforce, not the military workforce, in fact there is, there's going to be a requirement that sends that someone in authority has to sign off that this is all accurate and being done, and so that's, I mean that at least should be able to get people's attention.

**LTC Lopez:** Right, right, and that responsibility is the installation commander.

**Dr. LaForce:** Mary, let me make sure that I understand for the sake of the board in terms of where we are now. We're still operating under the question that was brought to the board that relates to the action plan (yes, sir), is that not true? (Yes, sir.) Ok, fine, so and this is the newest version of the action plan (yes, sir), which is based on—one of our recommendations was to solicit all the information from all the service, from the various services (yes, sir), which you have and you've now consolidated this into an action plan (yes, sir). And you now want us to review the action plan and either comment, support it, or offer commentary on it (yes, sir). Ok, fine. Ben?

**COL Diniega:** If I remember of our last meeting, though, Dr. Alexander, she drafted up the response back, the issue at the last meeting was an attempt by the working group to do a cost analysis, economic analysis tool, to develop an economic analysis tool that would be of help to the installations in looking at the cost-benefit of

having a program at that level and at that point the plan was to look at all ergonomics and related injuries, which the board felt was too large and the recommendation was to focus down and do like an alpha test first on specific group working occupation, like nurses and look at back pain, or to look at a specific injury, and I thought that was, the recommendation was to come back and rework the model and take a look at what that shows.

**LTC Lopez:** Yes, sir that's correct. You see, Mr. Bowling actually asked the board two questions. One dealt with the action plan, and one dealt with the cost-benefit model. We've taken Dr. Alexander's report and are working on that with the model. You didn't want to hear about the model, did you? I mean, because I thought I'd just address the action plan issue. I can fill in, at the next meeting, I can give you cost-benefit, if you really want to hear that, I can give it to you.

**COL Diniega:** Right, I think that was the biggie, but if the question, if this here addresses the action plan, then that's fine.

**Dr. LaForce:** That's good, but (yes, sir), next time around we're going to hear a bit in terms of the cost study (yes, sir). Ok, fine. (Yes, sir). I just wanted to make sure because sometimes it gets a little bit confusing, if tomorrow morning when the subcommittee takes it on, we just want to make sure that we help you (yes, sir) in terms of focusing on what it is that you think we should be focusing on (yes, sir).

**COL Diniega:** And you'll be at the subcommittee meeting?

**LTC Lopez:** If you want me to, sir.

**Dr. LaForce:** Yeah, I think that would be very important, Rosy, ok? Would be to have you there. And the homework that needs to happen from now till tomorrow now is this 60 pages or so of stuff that's here, right?

**LTC Lopez:** If you want me to get that together.....

**Dr. LaForce:** No, no, no. I'm not trying to be funny at all, but I'm saying that we would be responsible for reviewing this before we can provide the intelligent feedback.

**LTC Lopez:** Yes, I provided this to give you the background information, and hopefully it's clear enough that it doesn't take too much time to read the 60 pages. Are there any other questions?

**Dr. LaForce:** Yeah, other questions? Linda or?

**Dr. Alexander:** The organizational questions? I don't know if anybody took the time to read the organizational questions? I often feel the work I have to do interferes with how well I can do it, etc. This is a job description of my job description. I'm not sure that, I think everybody who works hard at what they do that they would answer all these questions yes. I'm curious to know if anybody...

**LTC Lopez:** Although some do answer no, but it also indicated a level of stress, because we know that psycho-social factors play into the development of musculoskeletal...

**Dr. Alexander:** It's a great plus. I'm just not taking it home with me; everybody will flip.

**Dr. LaForce:** What's happened with OSHA now? OSHA's now published all of its guidelines now?



**Dr. Sokas:** Yeah, I mean it's just exactly what we just got presented. This was a huge, enormous effort to get this thing published. It actually made it out into the federal register before the freeze got put on, so in fact it's there, it's out. Now, nobody knows what's going to happen to it, and certainly it's got a big target, you know, around it, but for now, and it hasn't been, as far as I'm aware, it hasn't been stayed at all, so as you said it's in effect, that's it, that's the law of the land, basically, and nobody knows what's going to be true with the court case, although they did manage to get a huge body of evidence in the preamble and in the justification for it, so it would be, it would be difficult to show that there were lots of things that hadn't been thought of, because there was a lot of effort put in. Now the fact that, the fact that there are pieces of it that are severely criticized by many different people, who knows, and it may well be that Congress for the first time ever will utilize its capacity to you know revoke a regulation.

**Dr. LaForce:** So this isn't like pardons and gifts?

**Dr. Sokas:** No, no, no it's not.

**LTC Lopez:** Now wait a minute...

**Dr. LaForce:** So this one actually has got some sort of reason to sort of stay put, and no one is really going to go out after it, because of something.

**Dr. Sokas:** No, no, no, it has the reason to be there and stay put, and they're going to go after it with everything they have...

**Dr. LaForce:** True, two unrelated... This, I must admit, every time I come to a board session on ergonomics I feel as though I'm learning yet something else, in terms of how complex all of this is.

**LTC Mary Lopez:** It is. When you get the politics in, it's all more complex.

**Dr. LaForce:** Ok, because during the last discussion as I recall when we talked about, oh this was going to be very helpful to you.

**LTC Mary Lopez:** Oh, OSHA economic analysis was very helpful to us, but the standard, the standard was helpful to us too, because the standard was out...

**Dr. LaForce:** Ok, of course. Fine. Yes?

**Dr. Patrick:** I'm really new to this and am trying to figure this all out, but I, it seems to me that a very fundamental, potential fatal issue gets back to this lack of alignment between authority and responsibility. Is that included in the action plan, to in fact move towards aligning authority and responsibility?

**LTC Mary Lopez:** The problem we really ran into is the action plan addresses DOD model issues and tools and program development. A lot of it falls back to the services; that link is more or less a service responsibility and so we're kind of stuck. Now, you're right because from the view of the Environmental Security office, they can push down to the services, so that might be something that we missed in the action plan that really should be incorporated, so you know I'd appreciate your input.

**Dr. Patrick:** And it almost seems as if, thinking of this, well, know, that just seems to be such a fundamental issue (it is), and actually getting to there on, actually getting this to become resolved, carefully handled, appropriately processed issue, that unless that's in some way included, this will be a perennial issue that will just continue to come up and come up.

**Dr. LaForce:** Let me ask a specific question to Dana. Dana, what would happen with, let's say the DOD ergonomics work plan or the action plan looked perfectly reasonable and is to be approved, etc. What I'm having difficulty with, and Dennis is, and I think several others, is that the sort of next step, what's the interface, how does it, when the rubber hits the road, how does this get implemented so it can have some positive benefit as far as the services?

**COL Bradshaw:** I think that the problem with this one, as there is with many things, is there's some things that for instance the medical community owns, both has authority and responsibility for, but this is one of those things that it crosses lines between the line side and the medical side, where some of this is safety community, some of this is you know in personnel, some of it's in medical, you know like we may have the responsibility of making the diagnoses, but who out on the flight line is going to, you know, look, what supervisor's going to say, ok, this is a problem here. I need to have the right equipment; I need to make sure my people are trained in the right way, and so on and so forth. So it crosses communities, and it requires an inter-disciplinary kind of approach to it, and some of that's on the line, and some of it's on the medical community side. I think we've had a little bit of success, and I think you've had some of that presented here, in working through the prevention safety health promotion council, which the IOIPC presents to that committee, because that council does cross lines, and you've got, you know, folks from USB, or the personnel readiness camps there, you got people from the safety community there, you have people from both line and from medical piece, because you have deputy SGs and SGs that are participating in that committee.

So then that can raise the level of visibility there, and then you can have you know these works. Now you have safety people that were working with you, right? It is a little bit difficult when identifying who's going to take responsibility for this piece or that piece, but sometimes it would take going up, in our case, probably all the way up to the Air Force chief of staff, GEN Ryan, and then coming back down to the communities, or even going up above that level to DOD level in many cases, to get action on some of these things, potentially. And funding is always a problem when you can't get an unfunded requirements, so OSHA makes regulation, or even at Health Affairs or us at our level at SG, it may be a requirement, but the money's not there to do it, necessarily, and then it takes two years to POM for that, and the folks that are on the money side have to look at the requirements, they all get racked and stacked, so they may be putting this in as a requirement, but in their mind, well it's more important to buy guns or bombs than to figure out how to load the bombs safely so we don't get our people hurt, so it falls out at the bottom, perhaps, even though you put it in as a requirement for funding. And not only that, it takes two years to get the money back. I mean these are all the complexities of trying to get stuff like this done, you know in our system.

**Dr. LaForce:** Can, can the board be, how can the board be most helpful? Because I'll be very honest with you, I've been actually quite impressed over the last presentations of the need for, and the utility of ergonomics, particularly when the studies were done in the Navy and you're able to see these rates go from 4 point something per thousand down to point 6. I mean, these were huge changes. These were like 70 percent reductions, and to me the question was, always, how on earth do

you wrestle with getting it implemented? And, not that we would have either the knowledge, or etc., but how could the board be helpful, at least in trying to facilitate its implementation, not get it implemented, that's not our job, but lobbying for implementation of something that seems to make sense, to me seems important. And the problem is, it's like a feather pillow, I just don't quite know where to go or what to do, and we had a long discussion last time, and we were really felt that, you know, the cost analysis would really come through and really be the banger in terms of being able to say, geez you've got to do this—it'll save you money, you can get the FTE and get, and have a healthier workforce to boot. Well, are we still there, are we gotten any further? I'm not sure.

**Dr. Patrick:** Maybe our role, maybe not, maybe it should be an objectives-based process instead, is that no matter how you get there, that there should be, that you should be getting there, that there should be positive direction in terms, in terms of these indicators. The indicators are problems associated with this and that those should match contemporary industry standards, and maybe OSHA, if OSHA is such a flaky political issue, it's really best to breed you know benchmark, I don't know, but I'm struggling with this, but it's an issue of, it should not be acceptable to have ergonomic related injury, problems that happen in the military, and that should be our policy, and therefore the way to get to that, to increasingly get to the point where those are no longer happening, it's really an implementation issue, but that our recommendation is that this is no longer acceptable.

**Dr. Sokas:** See and I would ignore the political aspects of what OSHA is and say look it, there's a regulation, there's a presidential executive order that exists

that says at least for the civilian workforce you are now required to do this and play it straight. And you know, who knows we could all be hit by a meteor tomorrow, you know you don't have to speculate on what the other outcomes are, but the nice, I mean there's some squirrely things, and quite frankly you can probably play around with the stuff you really wanted to implement for the military parts, but some of the basics, that there should be management commitment, that there should be employee participation, that there should be hazard identification, that there should be abatement, and that there should be program analysis, I mean this is not controversial. This is basic, TQM basic, so to the extent that it's useful, I think it wouldn't hurt to say, listen you know ignore the fact that it could be controversial, just say this is the current regulatory climate in which we live and this is what is now required of us.

**Dr. LaForce:** Ken?

**CAPT Schor:** You know what, Dana mentioned some of the issues that, you know, the issue of alignment and authority and all that, and I sit on the IOIPC also and it's still marshmallow city for me too, but I really think the key distinction here is that altruistically you have the military, you speak of the military. In Navy success, when I think of occupational medicine in my career, it's all civilian. OCDOCs in the mil, in the Navy are civilian, they only see civilians. I've never seen a Navy OCDOC that ever saw anybody but civilian, period, end of story, so this issue of altruistically lumping active duty and civilians is a real mess, and that's why Environmental Security is in this gamish is I think because it's civilian, I think.

Maybe not. The whole issue of lumping active duty and civilians is a huge confounder that makes this just that much bigger of a marshmallow.

**Dr. LaForce:** Should it be separated then, and looked at separable...?

**CAPT Schor:** I'd like to put it together, but I don't think that the history and the structures and all that allow, short of an act of God or some other huge decree coming down that has power and money and authority behind it. I think we're trying to solve the Middle East crisis here.

**Dr. LaForce:** Yes.

**Dr. Herbold:** Instead of talking about civilian employees versus military employees, or instead of talking about the regulatory environment, I think the best way the AFEB could approach this is to say that there is evidence that there's a cause and effect relationship between ergonomic design and ergonomic practices and injuries that lead to loss from duty and/or compensable claims. Where are the benchmarks? In the civilian sector, where you have civilian employees of the military, there are claims data and other metrics that can be used as benchmarks to show that if you implement an intervention, then you would expect to see a reduction in that metric, if it's related to the ergonomic design. In the active duty setting, you could ask where are the metrics? And then one of the gaps that would appear, is that you know we have problems in the medical setting attributing, we might be able to diagnose the problem, but we have difficulty attributing the exact agent. Is it the person, is it the person's behavior or is it the ergonomic design? And then we also, so that might be a gap that is not, that you can't breach.

The other question that you might look at is that in the systems set up that you have, there is a split in reporting between injury reporting and illness reporting, and so that from an organizational perspective if you're going to look at metrics, you might not capture injuries through the standard reporting system. You would have to go to the medics and see if you can capture them. And since the medics only see active duty, they don't see civilian employees, well then you can only capture that piece of the puzzle, and for the employee setting, well then you'd have to go, maybe do some federal health insurance data set to capture the medically diagnosable conditions. Those are the pathways where I think the Armed Forces Epi Board can identify gaps and say, ok, if we're trying to define a cause and effect relationship and an ability to measure an intervention's effect, these are the things that the epidemiologic approach would ask you to be able to answer. Then how it's organized, who gets their medical pair where, what the law is at the time. You know the question is, if we have a situation that impacts the number of workdays available and you can reduce them, well then it makes sense from a monetary point of view and from a worker productivity and from how long you can keep a skilled worker in a particular job that makes sense to intervene. So I wouldn't worry about whether they're civilian or military, but that does drive what metrics you have.

**Dr. LaForce:** Ok, I think tomorrow morning's discussion, the reason I wanted this discussion to go on a little bit longer today than I had originally planned was I was hoping to get as open a discussion in terms of trying to frame the responsibilities as far as the board tomorrow. Because this is the one real question that's on the table, I want to make sure that we absolutely help you in as much as we



possibly can in addressing that and at the same time we also try to understand, because we've had presentations over the last three board meetings, that have looked at civilian data and then I remember the reporting structure is that you had to be out of commission for longer than 24 hours to be listed, and we've had a series of presentations on both sides. Now it's becoming clear to me that you're right, we have had both presentations, and it doesn't look like it's going to be terribly well, it's going to be terribly easy to integrate all of that. Yes?

**LTC Riddle:** It seems to me that you're looking at the impact that the board may have would be in review of this data is something like a letter to ATNL that in the acquisition process that it's become evident to the AFEB that the human system is not considered, whether it's a litter or it's a joint strike fighter or it's the M-1, and that ATNL should incorporate some kind of a standard to make sure that the human interface is incorporated into the acquisition. I mean, Dr. Shanahan, he and I were talking about something like the kevlar helmet and infantry jumping out of planes, and the helmet was not designed with padding and you have a lot of head injuries and those things, and it all goes back to the acquisition. And the under secretary of defense for acquisition technology and logistics and them not considering the human interface when they go to procure technology.

**Dr. LaForce:** We've had several examples shown to us, you know the big pack, the fellow jumping in the water so they can short the pack out and then finally get rid of the pack because it was too heavy and it was hurting them. And so, ok, let's say time out to this, and we'll try, and what I would ask the board, please familiarize yourself, and particularly those on the subcommittee, the ergonomics

subcommittee, because we really are looking for some real in-depth thought as far as this is concerned. Ok, Colonel? Thank you very much. John, where are you? I've kept you waiting, I'm sorry. Vaccine health care centers, potential roles. Dr. Grabenstein is here this morning.

## **VACCINE HEALTH CARE CENTERS**

**LTC Grabenstein:** I was going to be quick, but it's reassuring to me that think that there's a complex, a problem more complex than the one that I deal with day to day, and yet in a manner of speaking, it's not (Rick, will you go to the next slide please). Because I want to take you back a couple of years to a document of yours, which on pages 76 to 89 dealt with the issue of vaccine delivery and implementing policy and making your wisdom happen across our vast and glorious system. And the approach that we are taking has taken on the term Vaccine Health Care Centers, with the accent going on the word Care, because we are talking about the care we take in the delivery of the vaccine, and the care we give in the management of adverse events after vaccination, whether or not causally associated with the vaccine, it does not matter. So this briefing will be an information briefing to give you the status of a project that is, that where the wheels are grinding and moving towards, towards true implementation and to get your feedback so that presumably at the next meeting we can come back with an official request from you, which if things go as they think they will be, will be to ask you for some, a subcommittee or a working group or some piece of your labor, your talent pool to help us with this project. And, so the issue is focusing on the delivery of vaccines and the management thereof, and the other document that applies here is the

Advisory Committee for Immunization Practices Standards for Adult Vaccination in Non-Traditional Sites. Now non-traditional sites in their parlance really was focusing on flu shot programs in churches and shopping malls and pharmacies and that sort of thing, but compared to static county health clinics, we are non-traditional sites, flight lines in jungles and aid stations and what have you.

So we wanted to harness or acknowledge that we should adopt and adhere to a set of standards in terms of our vaccination delivery, so the Vaccine Health Care Center Network is the thing, and it is a DOD/CDC collaborative effort. The money's with CDC, so I probably should have put CDC first in that sequence. All the organizational people chuckled at that one. But a network of education, education of providers primarily, but education of customers, of clients as well, clinical service and clinical service quality, and then research or surveillance or analysis of that work for both giving the shots and following up on them. And as CDC and DOD were coming together and having, specifically the immunization program, in getting each of us sharing corporate culture with each other, the analogy I used to them was, ok you're the CDC and I'm the state of Virginia, and I want you to help me improve the quality of vaccine delivery in my state, and I've got Richmond and I've got Alexandria and I've got Roanoke and I've got the eastern shore of Virginia, hugely dispersed set of clinics and I want to increase quality everywhere. And that's, the DOD in this analogy takes the place of the state of Virginia, so it's a question of performance improvement, communication research and the things that I've talked about. So this all, the ball started rolling in January. Winona Engler who many of you know, and one of her assistant chiefs, Brian Martin, began developing a

proposal, based largely on her work in contributing to Europe subcommittee work report, we knew that there was some funding we could tap from the FY00 CDC appropriation that we could take advantage of. February we came together for a meeting. In August Dr. Clinton signed a memo advising the surgeons general and the TRICARE management activity was a go, was given the go. And in September Walter Reed and the North Atlantic Regional Medical Command, CDC and HRSA, Health Resources and HRSA (Health Resources and Service Administration), signed an inter-agency agreement to begin the process of hiring some people to do this work, and I'll describe that for you on subsequent slides.

Those folks, the first set of those folks will come together February 26 for their first training, and we hope to have them in place to do their work in May. And the goal is for them to work on, or goals, increasing the safety and the quality of vaccine delivery, reporting of adverse events, management of adverse events, enhance the education and improve acceptability of vaccines, focusing on anthrax vaccines, but adult vaccines in general, providers and beneficiaries, and to share what they know so that we continue to improve the process. And more specific benefits, helping my program, our program, in the safety and acceptability of it, a standardization of vaccine delivery across both, across the services and across the settings, our fixed facilities and our mobile ones, surveillance, clinical management, analysis. Expert clinical consultations, not unlike some of the things you heard this morning with some of the telemedicine projects in this part of the world. And also site visits and outreach programs of various sorts to the vaccination sites, helping solve problems as CAPT Schor encountered as they went around, and just little

things that people back in headquarters tend to assume may not really be happening out in the field.

This is a wiring diagram of the way it looks at the moment, two, the leadership, two primary centers, the Allergy-Immunology department at Walter Reed and the National Immunization Program. And then we are proposing to give them, and I forget what this is, Microsoft Chart or something, I forget what the name of the software is, but this configuration is called Assistance when you hit that icon, and we want to create two groups to help this bunch, stakeholders, we'll bring the nurses in to, for them to tell us how to get it done, and all the parties that actually are involved with pushing down on the plungers, but also we're proposing that we bring together a subset of the Advisory Committee for Immunization Practices and the AFEB in what is at the moment entitled Clinic Advisory Board, we would propose that this either be a joint subcommittee or a joint working group of the two bodies, and I'll talk, I'll show you what we may ask of you in a little bit. Now this is the big idea, vision people. The implementation will happen, and this is something that's called the Lead VHC. The will be eventually we hope, depending on funding, a set of VHCs, the first one at Walter Reed, but additional ones as funding becomes available, and we've toyed with you know where the other ones would go, and pick a state, sure, you give us some money and we'll put one in your state, but the idea is to get one of these up and running so that, so that a lot of, what we call the capital documents, the standards and the protocols and the management routines and algorithms as appropriate, yet built so that the other facilities, the other VHCs can simply go about implementing those things.

Four basic job titles that are being hired: clinical immunologists at each site a physician, nurse practitioners to do a great deal of the clinical care and legwork, help educators to help with the educational piece, and this use to be called a data entry specialist, but I don't know how it's extra cost when they changed the title to network integrator, but it's the person who does data exchange stuff, technical wizardly stuff. So in June the ACIP agreed to charter what at the time they called, actually they used the word oversight, subcommittee for oversight at Vaccine Health Center Network, in which, which was proposed to meet jointly with some subset of you all, so if, based on your feedback, we might come back and ask you if you would be willing to form a subcommittee panel to ask whatever you want to call it. On the plane over here I would have the delight of reading the federal advisory committee act and trying to make myself familiar with, it was much more pleasant to be here, than if I'd read that, but you know, whether we want to have open meetings or closed meetings, subcommittees have to be open meetings and working groups don't have to be, but we can work that out with one or a number of your executive secretaries. And then whatever liaisons or consultants might be needed. And what we would ask of the august joint body is consultation, review and comment on those capital documents, the issues of clinical management protocols standards if we go that way, other vaccine delivery issues. What we're looking for is clinical wisdom, delivery of care wisdom, implementing policies as opposed to making the policies, perhaps two to three members.

I have copies here and I can leave them with you, the ACIP version, the ACIP documents already say subcommittee which then subjects you to the advisory

committee act, you know the conference call we had Friday we kind of came to the conclusion that maybe a working group was the better way to do it in terms of flexibility, but we can work that out, maybe one to three times a year, maybe by telephone or alternating half day sessions just before or after their meetings or your meetings, and the bottom line is we're making this up as we go along, and we're very flexible in how it really gets implemented, and we appreciate your advise. These are the three folks from the ACIP. Chuck Helms was chair of the ACIP working group who wrote the anthrax vaccine guidelines. David Johnson from Michigan Department of Community Health, and Lucy Tompkins from Stanford. Mike McNeil is the NIP staffer who is their secretary coordinator (last slide).

Why go through this? We want to enhance our safety surveillance, focusing on anthrax eventually, but we're trying to build it in a generic way so that it addresses adult immunization, I meant there's lots of spin-overs that could go to pediatric immunization too, but adult is really where we want to put this attention at first. Enhancing trust and ability to deliver vaccines with high quality. Competency and resources for continuous performance improvement. Initial focus on anthrax and VAERS reporting. So that's, we'd be curious, be very appreciative of your feedback about this approach and how if you would like to play a role in it.

**Dr. LaForce:** Thank you John.

**COL Diniega:** Question, question. Comment, I have a comment.

**Dr. LaForce:** Comment?

**COL Diniega:** Before the questions come. This is something that, some of the other things you need to know is that Dr. Clinton views this as a DOD/CDC, and

also the VA has been mentioned as a collaborative effort. It certainly is focusing on anthrax, because the issues are anthrax based, but there is a concept that it would devote to all the vaccines. Dr. Clinton has also sent out a memo to all of the SGs and we can get copies of that for the members of the board, directing the services that they will operate in this initiative. The ACIP has set up their subcommittee. I think there are various ways I think the AFEB can be involved and certainly jointly with the ACIP subcommittee is one of them to consider, and their job is that as was described to provide some sort of site guidance and oversight to the group.

Now I have to say on a personal level and also as the staffer at HA, that when I first heard of the proposal to do the Vaccine Health Centers, I had a lot of questions, and actually told the CDC people that it was not the right way to do it, but it's going to be done that way, and the structure I think that was shown, besides those two empty boxes on the bottom there where they have lead agency and other sites, I think there's some work that needs to be done on the very top of the structure that I can talk about a little bit more tomorrow. For example, you know CDC has the money if it's a DOD/CDC collaborative and the VA's going to be pulled in, then they need to have some executive something to oversee the implementation. And I would view the ACIP subcommittee and the AFEB as providing recommendations and guidance to that executive council. I think right now the structure shows WRAMC as the lead agent and in charge of everything...so. I think that needs to be worked, but I think there is a role for the AFEB. I think there's a commitment, and I think that the suggestion that it be done telephonically when it can be done or in conjunction with one of the other meetings, either the ACIP or the AFEB regular



meetings, just be a half a day the day before or something or stay another half a day, would help with the logistics and the tight time that everybody has, we don't have a lot of time to give to this. Now, questions?

**Dr. LaForce:** Questions?

**Dr. Ostroff:** I mean I think that this is very satisfying. I was the acting deputy at CDC when the rotavirus vaccine debacle occurred, and we made a big pitch to the department at the time that things like this needed to happen where some of this money came from in Fiscal Year '00, so it's nice to see this actually coming to fruition, because we need it. I know there are many of us that think simply having the VAERS system is never going to get us good information about adverse events related to vaccinations. One question, is there eventually a vision that in some of these places, simply encouraging reporting of adverse events may be replaced by actively seeking them? In other words, contacting people afterwards and actually asking them, rather than waiting for them to come and tell you?

**LTC Grabenstein:** Certainly. It's what's the best use of given of finding labor pool's time and bang for the buck and those kinds of things, but that's certainly a possibility. Another piece of it in that Bob Chan and NIP group are working on similar kinds of things that they call Centers of Excellence in the civilian sector we'd be you know cross-pollinating with their efforts as well.

**Dr. LaForce:** You know I think that this kind of initiative makes all the sense in the world, particularly with the investment that the board put in about two years ago, two and half years ago, when Greg Poland led the charge in terms of review, because I remember when I came on the board, the first thing that I was

asked to do was to review that as it was sort of finishing, and I thought it was a real tour de force, and I think that level of collaboration, particularly in terms of being able to explore strengths and exchange information across that, I can't really see anything terribly wrong. The downside is of course everybody's busy, so it's very important that this get as Ben said co-linked with meetings so it doesn't end up with a bunch of people saying yeah, yeah, yeah, and then no one's there at the meetings. That won't be helpful at all.

**LTC Grabenstein:** Personally, I'd almost recommend starting with teleconferences and then if you realize if you can't get your business done that way, progress to physical meetings in terms of flexibility.

**Dr. LaForce:** No, no. I think this is a very healthy maturation of the fact that frankly we're all in this together, and as for example the VA and this sort of consortium—who is the, is it Admiral Clinton, not Clinton, who was there before who's now leading this consortium with the VA and...?

**COL Diniega:** Claypool

**Dr. LaForce:** Claypool, that's right. I see this, certainly over the next decade as continuing to come closer, not splitting apart.

**LTC Grabenstein:** Getting a Health Service might be the other piece. I want to get our family we'll take care of and then...

#### **ADMINISTRATIVE REMARKS**

**Dr. LaForce:** All right, thank you. That's it I think for today. I had one announcement before we break up. There's no formal session for dinner tonight. I did check with Ben, and Ben told me of a Chinese restaurant called Legends at the

Chinese Cultural Center, and I was going to offer, for those of you who are interested to get, that Nancy and I were going to be down just where we met this morning, where we meet in the morning, at 7 o'clock tonight, so if individuals are interested in going to the Chinese restaurant in the Chinese Cultural Center, or we could just sort of mix there, and then there are probably going to be two or three cars that we can sort of figure out and assign people to, and if not, some people just take a cab and then meet us out there. It's not very far. It's, what, only about 10 minutes away.

**COL Dinieaga:** 10 or 15, it's downtown.

**Dr. LaForce:** Yeah, 10 or 15. It's downtown, but it's in Chinatown, it's in Chinatown, so for those individuals who are interested it, just look for Nancy or I or anyone else from the group out front at about 7 this evening. Yes, John.

**Dr. Herbold:** Another social question. For the Pearl Harbor tour tomorrow, are there any plans for getting the spouses from the Hilton?

**Dr. LaForce:** I'm done

**COL Withers:** Ok, tomorrow we'll assemble at 7 o'clock with no cars. It won't be quite as lavish tomorrow, there won't be as continental a breakfast, there will be a few little things, but we'll move to Tripler. Again, we're not really car-pooling so you go one exit further and you'll see Tripler; it's very easy. You'll go up the hill, head for the flagpole and park there.

**Dr. LaForce:** Ok, where will we meet at 7, I mean if we leave there at 7, where will we meet in Tripler?

**COL Withers:** At the 10th floor.

**Dr. LaForce:** Tenth floor. Ok.

**COL Diniega:** Tripler, 10th floor. That was pretty easy. No meeting here now, Tripler.

**Dr. LaForce:** Tripler's the meeting. And we're to be at Tripler by 7 (it's 8) 7:45, it says 7:45 (that's wrong, forget that). 8 o'clock.

**COL Withers:** You know, I think that the better we get we can afford to meet at 7 and not 6:45. I'll be there or Rick will, we'll make sure everybody's got a ride, we'll go to the cars and go for it.

**Dr. Ostroff:** In terms of the traffic getting on the H1 we ought to leave 10 minutes earlier.

**Dr. LaForce:** And the Tripler exit is not the Ft. Shafter exit, it's the next one so I just keep going. Ok. Thank you.

**COL Withers:** Remember, park at the flagpole. It's on the ocean side, 10<sup>th</sup> floor. At 11:45 we'll go take our picture by the flagpole and then we'll do lunch. And lunch is from 12 to 1. Everybody bring \$3.60, bring three and a half, if that's tough, I'll throw in the extra dollar. Remember. Oh very important, if you are leaving tomorrow in the afternoon, there's not going to be any real opportunity to get back to the hotel, so check out before, do what you need to do, but check out time is at 11. If you plan to leave from Tripler or from the Barge tour to go to the airport...

**Thursday, 08 February, 2001**  
**Tripler AMC 10A**

**(0800)**

{Transcription: Tape 8}

### **ADMINISTRATIVE REMARKS**

**Dr. LaForce:** Good morning to everyone. We're just going to begin with just a general introduction and then COL Withers has a few administrative remarks to review what will transpire later this morning, and then we'll go on to the presentation vis a vis the brief for Tripler. Ben.

**COL Withers:** Ok, good morning everybody and welcome to our last day. First of all, what board members or guests are leaving this morning, and if you'd raise your hand we do have the ability to give you a ride to the airport. Anyone else besides Dr. Patrick?

**Dr. Ostroff:** I'm leaving about 5 o'clock.

**COL Withers:** Well, we'll take care of you later then. Ok, then thank you, doctor. Remember we'll be here for the remainder of the morning. We'll step out about 11:35 or so, go back down to the flagpole where we all parked, then do a picture at 11:45 and then we'll return to the Tripler dining facility for lunch from 12 to 1. I'm going to come around. Let me say this, I need to collect three dollars and fifty or sixty cents from everybody, so to make that go quickly, at your convenience

at the break maybe give it to me, or just you know get it ready and I'll get or give it to me some time this morning. We'll leave pretty promptly at 1 o'clock from here for the Remembrance Barge tour, and that'll go till 3:30, and at that point, we're pretty much on our own. The Pearl PX there, which is pretty nice, and you all have letters to allow you to get in, is there, so we can either shop or depart from there. It's just you know as we feel fit. Ok, any other questions of me or anything? If you have a particular you know need or issue just let me know.

**Dr. LaForce:** Yeah, and before we go I really want to thank those hearty souls who helped work out the tour arrangements yesterday afternoon. The tour director Ernie was just outstanding in terms of the Hawaiian lore. I picked up more in a couple of hours with Ernie than I have on three or four trips here in the past. This was, but again, that was just a thank you from all board members who thought that was just an enormous amount.

**MG Adams:** Did you go to the North Shore?

**Dr. LaForce:** No, we didn't get far, we just...

**MG Adams:** Not that far? Dukes on the beach, right?

**Dr. LaForce:** And Nancy wanted to thank you very much for finding the ice cream place. That was the last thing that she said last night. She just wanted to make sure that she was remembered for finding this ice cream place on the other side of town.

**MG Adams:** That's Dr. LaForce's wife, not me. Let's make that clear.

**Dr. LaForce:** I should have said Mrs. LaForce. My apologies. Ok, let's begin. MG Adams.

## **TRIPLER BRIEF**

**MG Adams:** I've been instructed to do my Hawaii lesson today, which is not a dance, actually when you see what I do with the language you'll see where my talents lie. The phrase of the day is a komo mai?

**COL Diniega:** E komo mai.

**MG Adams:** E komo mai, which means welcome. You know when I spell phonetically I can't say it. But indeed we are pleased to welcome the AFEB, and these surroundings aren't nearly as luxurious as what you had over at the golf club, but I noticed with all the work you do I think you could do it anywhere, because you're focused on the agenda for the day, and we've got a half hour this morning to talk about Tripler Army Medical Center, and I'm going to ask my executive officer Ken Canestrini to do that, and then I'll have a few slides to talk to you about TRICARE, which is the military health care system's managed care program, to give you an idea with TRICARE Pacific looks like, because we are a little bit different, and I'm glad to say, a lot better than TRICARE on the mainland, so indeed we have a great little story. Ken? We need to turn out the lights so the ink shows up.

**LTC Canestrini:** Good morning. We have slides, you have slides with you, and Murphy's law's with me I have a couple, I have a couple of TRICARE slides missing that the general gave me last night but we're having them printed and they will be ready for you at this briefing. The command briefing will follow this outline. I'm going to give you an overview of the history and the missions, the vision, and then the organizational structure, and then a little bit about the DOD joint venture here at Tripler. I realize in each of your packets there's a very detailed handout of the history of Tripler. I'll give you an overview of it. Basically military medicine

started in 1898 in the Kapiolani Park down there by Waikiki when a regiment from New York established operations there. They actually had a hospital with about 10 beds under canvas, and this was primarily to help receive disease, non-battle injuries from the Spanish American War that was happening in the Philippines, and it expanded operations to the point where they needed 30 beds, and they actually took some along King St. some buildings there and turned them into a little hospital. Eventually it became overpowering and they had to disband that operation (next slide).

Fort Shafter, which is the, basically, next ridge over here in Hawaii, is where they established the first hospital. It was constructed in 1907, and this hospital was, you know, one lab, five beds and like one OR. As you can see it expanded up to 256 beds by 1917, they just added onto the structure, and then in 1920 it was renamed Tripler Hospital. At this point it had gotten up to about 456 beds (next slide). In honor of GEN Tripler the hospital was named, and he was primarily known as the first medical director of the Army combat during the Civil War, and he was also instrumental in designing the wheeled ambulance patient evacuation system, and if you're down in the main lobby here, you have an opportunity to go out the main doors when you go down and look at the display off to the right, is a model of the ambulance that he helped design, and he was the author of our, of the first surgeon manual, field surgeon's manual (next). And of course as most of you are familiar with, December 7, 1941, right out front there, Pearl Harbor was attacked, and on that day they had us up to receive almost 1800 to 2000 patients that were received at the hospital. In honor, eventually what happened was, that in recognizing Tripler's role



in the war effort there, in 1995, Tripler was finally recognized with being a battle stripper (next slide), and it is currently the only DOD medical center to have a battle stripper. 1940s as you can see they started construction up here on Tripler ridge, but it was not completed until about 1948, and that's when they opened the doors. Then you can, I've just got to show this, as you can see, basically, that's the mountain side, ocean side, it primarily was developed with one main center and then the four wings off. As you can see it's terraced down the hill. Back then there was no air conditioning. It was designed so it could catch the trade winds coming off the hill; that was back, as a matter of fact, we still had some wards that had no AC back in '95, the older ones that we were remodeling, and the wind could be so fierce that you could barely a little crack would get a breeze coming through there (next slide).

The structure to the rear, let me step out here to kind of point it out. Here's the main Tripler and to the rear here you can see all this new development, and what this entails is about 600,000 square feet primarily of ambulatory care clinics and also new ORs and new intensive care units that were completed in 1988. This slide basically is trying to give you an idea, that was one of the wards back awhile, and we've kind of come a long way in this facility since then. I'll touch on the mission and the vision here at Tripler. Readiness. This is based upon, you know just like the surgeon general's strategy is we're going to deploy a healthy fighting force, and we're also going to deploy a trained and ready medical force, and then at the same time we'll manage the care of the beneficiaries.

**MG Adams:** Prior to TRICARE that third element would probably have said provide care to beneficiaries, and then the reality is with downsizing there's no

way that we could serve our entire beneficiary population, active duty family members and retirees, so the indication is that if we don't provide the care, we'll manage the care, but we're still bottom line is responsible and accountable for the care.

**LTC Canestrini:** The commanding general's vision statement here rests upon those three words: balancing quality, efficiency and access for the delivery of care (next slide). As most of you all know, we do sit in the middle of the Pacific, and the Area of Operations is pretty much similar to the PACOM Area of Operations, and as you can see it extends as far to the west as Madagascar and comes along to the coastline of the mainland. What we do point out is that Alaska is, you know, a different color there, and this is primarily because it comes under the lead agent, you know the general will talk about that when TRICARE comes, but it's not, at the, but for referral for care and everything primarily will go down to Madigan. The island of Oahu, you see Tripler in the middle there, tertiary care and all the in patient care for DOD, with the other primary care clinics located throughout the island.

**MG Adams:** And the Department of Defense does care for Coast Guard beneficiaries. The Department of Transportation reimburses us for that care, but they are considered a uniformed service and we provide care.

**LTC Canestrini:** Right through here at Tripler, as you can see the commanding general has one, two, three, five hats. She is the commander of Tripler, she's also the commander of Pacific Regional Medical Command which includes the clinic that is in Japan, and she is also the lead agent for the region, and she's also the

USARPAC surgeon, and then she's the PROFIS Commander to the 18<sup>th</sup> Medcom for Korea.

**MG Adams:** There's significant overlap, and in reality the Pacific Regional Medical Command is Tripler plus a health clinic that I have in Camp Zama, so indeed 99 percent of the PRMC is Tripler. There is some synergy among those jobs.

**LTC Canestrini:** To help the commanding general out, obviously she has her command sergeant major, Sgt. MAJ Burton, and she has four deputies.

**MG Adams:** And one of my deputies, Rich do you have? CAPT Rich Jefferies is my deputy commander for clinical services, or my chief physician, if you will in terms of the medical staff. He is wearing a Navy uniform, because that when hence he comes and the population we serve here in the Pacific is about 50 percent Navy, with the Marines included, so it just helps for the efficient operation to have a Navy officer as part of the command structure here.

**Dr. LaForce:** I see some good friends too.

**MG Adams:** Yeah, we can talk to the Navy. Rich translates for us.

**LTC Canestrini:** The deputy commander for administration is COL Briggs who is responsible for obviously all the administrative services. Then we have deputy command for the region, which is COL Takafuji, which you all have met. He's responsible primarily for our readiness operations and mobilization, and then we have the deputy commander for nursing COL Roar, who is responsible for all in-patient, out patient nursing services. Population served: as you can see it's 140,000 there of the local population, family members, active duty members, retirees, and retirees above 65. And one of the unique things for Tripler Medical Center that as

you can see that the population over 65 is only 10,000 which is a lot smaller than what the mainland medical centers have in population, and that's obviously due to the cost in Hawaii.

**MG Adams:** Yeah, most of the military who have retired here bought houses back in the 70s when Viet Nam was still going and officers were rotating over to Viet Nam two and three tours, so their families often stayed here, they bought houses, then they kept them and came back here, so there are lot of older colonels and generals that are here.

**LTC Canestrini:** And here's the total population supported. We have our local population, which you just saw, and also we support approximately 120,000 veterans who are located on all the islands of in Hawaii, and of that 120,000, there's about 12,000 that are actively engaged in seeking health care through the... Then we have a referral population of approximately 170,000 and that was taken the whole specific basin on that slide you can see.

**COL Withers:** I'm sorry, I missed one statistic. About how many retirees live here on Oahu?

**LTC Canestrini:** Can you back up the slide please?

**MG Adams:** 33,000. Those are...

**COL Withers:** Thank you.

**LTC Canestrini:** (And the next slide). Operating beds. What I try to show on this slide is the 1997-2000 we like the civilian sector like to decrease the number of in patient beds. You can see from 433 down to 246 and currently average in patient census is about 166 a day here at Tripler (next slide). A day at Tripler, gives

you a flavor for how busy we are, and with the young population that we serve, just like most medical centers in DOD or MEDEX in DOD, is number one DRG for us is primarily OB GYN related with the delivery of babies.

**MG Adams:** Six out of 10 of our top DRGs are related, OB or GYN related, three are for psych, and one, knees. It's kind of a...

**LTC Canestrini:** This slide is primarily to show you the break out of the number of personnel. It takes about almost 3,000 personnel to run this medical center. You can see if you were to add up the total number of physicians, the top three lines there, it's about 412 physicians on staff, 400 Army Nurse Corps personnel, and then the further break down. At the bottom there all others, you can see almost 900 civil service plus about 250 contract type personnel.

**MG Adams:** Half of my positions are in physicians in training, either residents or interns.

**LTC Canestrini:** A \$234 million operation, and about 65 percent or so is civilian paid with a military paid, just like any other outfit or organization, it's personnel heavy. Now this slide, reimbursables, of that budget about \$25 million will be recouped for reimbursement, and as you can see the VA provides about \$13 million a year, and they are over half of our reimbursements.

**Dr. LaForce:** Where's Medicare?

**MG Adams:** We're, good question, because I spend about \$35 million a year caring for beneficiaries over the age of 65 who, of course, by law are Medicare eligible. Until this year they were not eligible for TRICARE, but Medicare is not allowed to reimburse Department of Defense. There is a law, a federal law that

essentially says when the Congress appropriates money it has to go to the federal agency it was appropriated to, so you're not allowed to move money from one federal agency to another. We had a demonstration project that was called Subvention, which is essentially the legal term, which would allow us to move money from Health and Human Services over to DOD to pay for the Medicare population. Unfortunately, or maybe we're fortunate, DOD does not have the accounting systems to be able to prove to HICVA what our level of effort has been.

So we entered into this demonstration project three years ago; to date we have not collected one nickel, nothing from them. We've continued to provide the care, and we have to provide the care for the GME, as well as well as for the promise that essentially the Department of Defense made to military personnel which was essentially lifetime health care. It was caveated by saying "space available," so they had to wait for the care, and of course now the environment has changed in terms of having access standards, as well as we have fewer military hospitals, so having space available care is much harder to provide, but where you do have a military hospital, you would like to take care of the Medicare beneficiaries. This year, it is this year, the National Authorization Defense Act or whatever, has allowed us now to care for over 65; that is now going to become part of our responsibilities, formally, but they did not appropriate any money. They told us to do it, but so far there's no money in the president's budget. It's supposed to start on 1 October of this year, so we will then have the potential to get money at least from the Congress to pay us for the care, where previously it has not been paid for in terms of our level of effort. We kind of, you know, we do it under the table.

**Dr. LaForce:** I hope the HICVA director buys you dinner, when you visit Washington.

**MG Adams:** Well, you know when you talk to them, their attitude is, we're a trillion dollars or more in debt; you guys are just, we estimate our level of effort in DOD for over 65 care is about \$1.3 billion you know a year, so they just kind of look at us as budget ducks, so, we're not going to bother to pay you guys, but it's, and to give you an ex... we've dealt with budget, we've been funded on the average, our budget has stayed essentially flatline, about a one percent increase each year, and that one percent has to pay for any pay increases that come, so essentially we're, you know, we're not, we don't have the same buying power today that we had a year ago or two years ago, so we're getting into a very tight box, and one of the things that helps to save us essentially, we have the ability to earn money, and that's what that \$25 million is, reimbursables, people who come here for health care that we can then submit a bill.

So the veterans, we are the VA hospital in Hawaii, there is no VA hospital, that ambulatory care clinic. We provided \$14 million with care to them last year. As I said, the Coast Guard, they pay us. Pacific Island program is Dr. Person's program, we get the money from the Congress from that. Third party collections—if retirees or family members of active duty are employed and have insurance and they come here for care, we can bill their insurance companies, though some of that we're not paying dollar for dollar anymore, because they're saying we owe it to these military beneficiaries to provide for the care, so we're going to have to go to court as a program to try to get some of that money.

**Dr. Patrick:** What about doctor, doctor care, extended care, are you reimbursed for any of that?

**MG Adams:** No sir, we don't provide any long-term care, and that's one of the concerns, as we're now are going to be authorized to do over 65 care, the way the legislation is written is TRICARE is the second payer to Medicare. So if I then electively enroll an over 65 patient, I've got to, we have got to come to agreement with Medicare that I do not take on the liability for long-term care, because DOD doesn't have the dollars, nor any type of facilities, nor the infrastructure to move those patients into the community.

**LTC Canestrini:** Tripler is a major teaching facility, 200 plus in training, Pacific Island Health Care Program (I'll have the other slide come up on that), then we also have the Tripler, what we call the Silver program, where the approximately of those retirees over 65 who are actually empanelled here to receive primary care in support of DOD.

**MG Adams:** So we had to have a predictable way of caring for those over 65, so we titled it Tripler Silver and they're empanelled not enrolled, and now we're wondering how that, what our level of effort's going to be now that we're entitled to take care of all of them. The bottom line is I don't have the money, and if it's not been appropriated, I don't see how I'm going to be able to expand my level of effort, which of course for those 6,000 who can't be empanelled here, it is going to be a significant issue, because they think now that they've got the legislation, that to open the door for them to come here. What they have is the legislation to pay what Medicare won't pay, because I still have no way to access any additional money.



**LTC Canestrini:** Number of physicians in training, this is just a break down for you, and as you can see almost 200 physicians.

**MG Adams:** Medical service corps is psychology fellowship programs that we have here.

**Dr. Sokas:** Do you get separate funding streams for the GME?

**MG Adams:** No. We have a saying, it's in the core (C-O-R-E), you know, we've never had visibility of that core, but it's in there. In fact I moved 17 residents tours from Eisenhower over the past two years, and no money came with them, and now we're trying to go back and say hey, guys, you owe us, there's a bill that comes with taking on 17 additional residents in terms of space and support services, and faculty, so.

**LTC Canestrini:** Medical specialties here at Tripler, and those highlighted in red are those that we have teaching programs. In addition to those, those are our fellowships, our graduate programs. Pacific Island Nation Program...

**MG Adams:** Dr. Person talked about that.

**LTC Canestrini:** Ok (next slide). Readiness. As you can see as a military organization we also have a readiness mission. There's 31 personnel identified here at Tripler to support the 25<sup>th</sup> Infantry Division, which is located here on the island of Oahu at Schofield Barracks. In addition to that, we have over 600 personnel that are identified to go support the Korean peninsular, and the initial mission of expanding the 18<sup>th</sup> medical command in Korea. Yes, sir.

**COL Diniega:** Question. I assume that they are not trained with the units that they are going to be going to war with.

**MG Adams:** The 31 do train with the unit, they go up to train with the 25<sup>th</sup> ID, so whenever they go to the JRTC or anything like that, our, the docs go with them. The 614, in fact what we're training now in the Pacific Warrior exercise out in Schofield, so we provide, we bring dep meds equipment, the deployable medical system here and we train them. Then we also have the opportunity to go to Korea, usually twice a year to send a slice to go over there and train on ground with the 121.

**Col Diniega:** How do you handle the back fill, ma'am, during these training periods, or it's out of hide?

**MG Adams:** No, no it's not out of hide, because we couldn't do it, in fact right now we've got 190 reservists working today in Tripler from three hospitals essentially, one, the 1984 that's partly here in Hawaii, partly in Alaska, as well as the hospital from Denver, who are back filling while I have my people out in the field doing the training. We couldn't do it. Because of TRICARE and the access standards, there's no way you could pull 300 people out and continue business as usual.

**COL Takafuji:** They enjoy the training, they want the training too so it works out quite nice.

**LTC Canestrini:** As the general just highlighted, basically we do have a backfill mission there, the units that are identified and the number of personnel (next slide).

**MG Adams:** We do not have problems getting reservists to want to come here to train, and we do it, and as we get closer to summer with the summer underlap when people leave and we don't have the replacements, we'll say, we'll put the word

out to the reserve hospitals, we need a urologist or we need nurse anesthetists, but if they have people, they'll put the word out in the unit, and we'll get volunteers who'll then come over for two weeks of training, or whatever, so you know, location does count both in health care and in real estate.

**COL Bradshaw:** GEN Adams, I don't think there were any objections from the members of the AFEB about coming here.

**MG Adams:** In fact at Pac Warrior we have a Navy Seabee unit from Maine, here.

**LTC Canestrini:** Operation Pacific Warrior, which is wrapping up as we stand right now, they're tearing down the hospital, but basically it's, we're in our second year here and this operation has gotten pretty big. Approximately 2000 personnel were involved in this recent operation. Approximately, almost 1000 of them being Air Force. We had the Air Force, the clinical hospital, the Navy clinical hospital, the air force clinical hospital. One of the unique things about being in Hawaii and Tripler, Tripler has always been the in patient source of care for the VA, where in the mainland you'll have a VA hospital or such, so this has always been the way we've done business in Hawaii, where they've had outpatient clinics and then referred to us for tertiary care where we can take care of them or refer patients. Through various initiatives the bottom line is that in order to see if we can integrate the VA and the DOD here in the State of Hawaii, and in 1995 we actually started construction projects here on Tripler ridge to see if we could relocate their outpatient clinic, which was downtown in the federal building, bring it up here, and also some of their other entities which I'll show you in a few minutes (next slide).

Now this slide's a good slide for just giving you the lay of the land here at Tripler. You're familiar with the building there. The first item that we needed to bring on board was a, you know, a parking garage; as you can see parking's a premium out there. Anything we wanted to build we needed to build up on the parking levels, so we had the VA build a parking garage, five level facility, it's very beautiful.

**MG Adams:** It's the nicest parking garage I've ever seen. Planters and everything.

**Dr. LaForce:** I suppose more than most VA hospitals.

**LTC Canestrini:** The next item that they actually went ahead and built was a 60-bed long-term care facility, and primarily it's a rehabilitative facility, and it's and again, another beautiful building located just down the hill from us.

**Dr. LaForce:** What type of aid?

**MG Adams:** Patients who'd benefit from skilled nursing care can be discharged hopefully within 30 to 60 days. The problem is though that they get patients often stay for longer down there, because there's no other place in the community. Hawaii's very much under-served in terms of any type of skilled nursing facilities, and many of the veterans don't have other family members, so they end up staying there long term.

**LTC Canestrini:** On the wing up front there is what the VA or the VAMROC actually moved into, and that is for all VA operations in the State of Hawaii. In addition, we have our resource management division is also sharing the building with them (next slide). And then finally, the ambulatory care clinic was

established, it's in the back there, it's about 93,000 square foot, it's you know state of the art primary care health clinic (next). Mission, the vision between the VA and the DOD here at Tripler.

**MG Adams:** I have to, right now, the mission and vision are words; we are not currently an integrated system, we are two parallel systems sharing real estate. I've worked with the VA, the VAMROC director here, Dave Burge, we want to work together, we have the same ideas, but when you try to leverage the resources for both systems, the bureaucracy prevents it from happening, so if we put, we can't merge our money, we can't merge our people, we can barter with each other, and he can buy services from me, but if you want to say run a single radiology service (which makes sense), you can't, we can't, he's paying a contractor now. I have the capability here, if he stops paying his contractor, then he does not get the money from his headquarters for that position any more, so then he doesn't have the money to pay me for the radiology services. We've got a new secretary for Veterans Affairs now, Mr. Prensippi, who authored something called the Prensippi Commission about four or five years ago, that indeed talked about merging DOD health care with VA health care. So I would hope, and Mr. Prensippi in fact is visiting Alaska next week, that we now can talk to him about getting some Washington leadership to change the bureaucracy so we can at least do a prototype program out here and show them where we can work better and smarter together, because right now it's good will and a handshake, and you can only go so far.

The other problem we have is how do you de-conflict the health benefits. We have beneficiaries now who are medical retirees, VA beneficiaries because of

service-connected disabilities, and Medicare beneficiaries. They're entitled to all three systems, but you really don't want to deliver one health benefit, you want to be paid for it. Well, the VA can't pay me for their part of the care, and as we talked Medicare can't pay, but Medicare has some benefits that the military and the VA health care system doesn't, so we've got to be able to coordinate the benefit, be able to make decisions to say to the beneficiary, you choose where you want to be enrolled and have a single point of contact, but then articulate with the other systems (makes sense), so we've got a lot of work to do. And as I tell my people, we're all veterans in training. We're eventually going to move into that system, so, and it is a continuum of health care from the recruit until you're buried in a VA cemetery if that's you know, what you desire, but right now it's possible, it makes sense when you put it all together in one facility, you say aren't, you know, why don't I have one lab, why don't I have one X-ray, one pharmacy system, in terms of overhead and management with different delivery points. So this is where we want to go, but we're not there yet. We've got the mark on the wall, but there's a lot of work that's going to have to be done to make it happen.

**CDR Ludwig:** Yes, ma'am. I had, I'm a little bit puzzled how it is that the VA can pay another federal agency whereas HHS can't or the Department of Transportation, how does that work? Is that a shell game?

**MG Adams:** Because, the all the, there's legislation in effect that allows them to pay us for that, but there is no legislation in effect for Medicare, so the Medicare, and the Medicare is worked out of the, which committee? It's a different committee in Congress, so one comes under the Armed Services and the Veterans

and those committees agree to work together and to pay it, but I think it's the Commerce committee or one of those, and they just won't pay it. They won't authorize it, so if they don't authorize, we don't get paid.

**Dr. LaForce:** The other thing is, beneficiaries who are eligible for three separate systems, love it, because they really get very savvy about moving across different systems (You can't tell them no), no that's right, you can't say no, and they get expert at all of this and it's extraordinarily wasteful.

**MG Adams:** Now we see it daily where a patient will go to the VA, don't like, think they can get more or better and they come right next door to us, and if they're retired military, we start all over again.

**LTC Canestrini:** We have one other initiative that's in the works, possibility of a DOD/VA/University of Hawaii joint research facility, and Congress has provided approximately a million dollars to do a feasibility study on this, and COL Takafuji is our point person from DOD.

**COL Diniega:** We covered this yesterday.

**LTC Canestrini:** Ok (next slide).

**MG Adams:** You can go to the next slide. They've seen this map so many times they probably could draw it in their sleep now. Essentially, the TRICARE region for the managed care program is essentially the same as the Area of Responsibility for PACOM, so that's the good news, when you start to align command and control; however, it doesn't work quite that easily. You see Alaska up there in the corner. It doesn't make sense for us to air-evac patients from Alaska down to Hawaii. First of all, the military planes don't fly that route ordinarily, and

second because of the distance. So the health care support for Alaska comes out of Madigan Army Medical Center in Washington State. So right now what, I'm trying to realign my region and have for TRICARE purposes and have Alaska come under the jurisdiction of Madigan up in Washington State. So far we haven't been successful, you know it looks nice now, and when you talk to the leadership, they say Pacific equals Alaska plus Hawaii, so keep them that way, so bureaucracy again is kind of coming in the midst of common sense, but when you look at essentially a TRICARE in the Pacific, I've got four different areas. I've got TRICARE Alaska, TRICARE Hawaii, and TRICARE Pacific, which is that smaller circle outside the bigger circle—that's where we have military medical treatment facilities, so hospital in Korea and Japan and Okinawa. That larger circle that includes Australia down there we call TRICARE Pacific Remote—that is there are no US military treatment facilities out there, so essentially the health care delivery out there is by contract with the host nations that are there (next).

As I mentioned the different product lines, and that gives you a feel there for the populations that are supported. 43,000 active duty here in Hawaii, as I mentioned 50 percent of that population is Marines and Navy. And Alaska, the dominant population out of that 18,000, that's the active duty number, is the Air Force. The Air Force has 10,000 in Alaska. There are no Navy personnel, I think I'm safe to say. Every now and then there's one Navy person in Alaska, but ordinarily there are no Navy persons in Alaska, lots of Coast Guard though, and so the Coast Guard indeed is a key part of the population, in fact there's 2,000 Coast Guard up in Alaska. As I mentioned the West Pac, MTF affiliated sites where we



have military treatment facilities, and then the remote areas, such as Beijing, Polynesia, Madagascar, and that we cover with a contract with a company called SOS International (next).

Gives you an idea of what we serve here in Hawaii, and you saw some or heard some of this in the TRICARE briefing. One medical center here in Hawaii, which frankly makes it easy. If you compare Hawaii to the national capital region where TRICARE is not maybe working as well as it can; there are three military medical centers in the national capital region that have to work together in order to be efficient in terms of health care delivery, and that sometimes, well it doesn't sometimes, it always makes it more challenging. Here in Hawaii we only have the one medical center. Prime is essentially the health, that we've got three different elements in TRICARE, TRICARE Prime, TRICARE Extra, and TRICARE Standard. TRICARE Prime is where you enroll for primary, with primary care through a physician at a military treatment facility ordinarily, and here in Hawaii the military treatment facilities provide 97 percent of all the health care, so only 3 percent of my beneficiaries are using civilian network physicians for their primary care. So that means that essentially the military is the dominant provider of health care for the military beneficiary here in Hawaii. Hawaii has been very good to us in a managed care environment, because historically Hawaii is a managed care state, so Hawaii works friendly with managed care.

That is not the situation in Alaska. Alaska essentially, to say they're unfriendly about managed care is probably an understatement. Most physicians went to Alaska to escape managed care. There is no managed care in Alaska. There is a

scarcity of providers; therefore, to get those providers to work with us in a managed care environment has been essentially a mission impossible for us (next, got ahead there). In fact my biggest problem in Alaska, because we've only got, we have an Air Force hospital at Elmendorf, and we have an Army hospital at Bassett, which is very small, about 30 beds, but we don't have a lot of the specialists in Alaska. We have no neurosurgery capability, no cardiovascular surgery, no neonatal, intensive care capability, so we have to buy health care in Alaska, and we pay, to get an office visit in Alaska, internal medicine or family practice, runs around \$220, \$240. The TRICARE reimbursement is \$61. They don't want to do business with us in Alaska, and there is nothing we can do to affect that, so indeed to support our population in Alaska is to move military specialists up there as needed, as well as to air-evac patients out of Alaska. Yeah.

**Dr. LaForce:** I now see the logic of transferring this to Madigan, and also their reticence.

**MG Adams:** Right. The reality of it is I do not send my health care providers to Alaska. It takes you two days to get up there from here, and it's \$1000 through Seattle or Los Angeles, so it's much faster to just go from SEA-TAC up to Alaska, but indeed there are costs associated with providing health care in Alaska, I guess that is the nice way to put it. And then as I mentioned we have TRICARE West Pac, which essentially, if you ask the beneficiaries out there probably say, you know, this is not really TRICARE, because all we're doing is coming to the military treatment facility and you tell us you're providing TRI, you're providing the TRICARE health benefits, so nothing has changed. What has changed, though, are

those beneficiaries if they're traveling and come back to the mainland are covered by the TRICARE program, so if they don't enroll and identify themselves out while they're assigned overseas and then they travel back to the US and try to access the military health care system, they're going to have a problem, because they're not going to be identified as an enrolled beneficiary.

And the other benefit of TRICARE in terms of a military treatment facility are the standards. We now have access standards. We used to work on space-available care or routine, which meant when I get around to it, you'll get the care. Now we have strict standards in terms of what is access for routine health care, for specialty referral, for acute analysis, same day referrals and such, so the level, the standard of care has improved under the TRICARE program. As I mentioned in the remote sites, no military medical facilities available, but this is essentially a cost-free system to the beneficiary. The contracts are in place. It used to be for a US service member to access health care overseas you had to come with cash in hand, because the Asian providers did not want to deal with credit cards, and you were an unknown entity to them, so the only way you could get health care would be to pay out of pocket and then file a claim and such, which was, took a long time to get reimbursed if you were assigned to Beijing, so now indeed we work it through a contract and there's no need for any out of pocket expense, expenses when our active duty or their family members access health care (next). And that's it, unless you have some questions. Yes, sir.

**Dr. Ostroff:** Ok, I have two questions. One of them is I wondered if you can describe your working relationship with the University of Hawaii School of

Medicine. One of our biggest disappointments in the Public Health Service was seeing the School of Public Health go away here. And my second question is, who decided that the building should be pink?

**MG Adams:** First of all, I need to let you know, I didn't decide it, so I don't want history to show that back in the 90s they had a female commander who painted the building pink. It was pink from the moment it was constructed. The story goes, and we got it from the secretary of the engineer on the occasion of the 50<sup>th</sup> anniversary, which was in 1998, when you saw that in the photograph you saw when they constructed it, they leveled the hill, there was nothing here. And if you notice the soil color here, it's like Georgia, it's red dirt, that's because of the volcanic, so when they wanted to paint it, they wanted to paint it a color that would hide the dirt if it splashed up on their building, because when it rains you get the red stains on it, so initially the request was for a terra cotta color, which you know, now that we're familiar with the California and Arizona motif we know what that color is, the reddish brown color, but that color was not available here in Hawaii. It wasn't known and was not really aesthetically pleasing to them, so this pink color is what historically has been identified with royal or with high prestige buildings, so if you look at the, what is it the Sheraton, Ernie (the Royal Hawaiian), the Royal Hawaiian, the Sheraton owns it don't they, Royal Hawaiian or whatever downtown, that is pink, and there are some other high profile buildings, but now of course it's historical, so it will be pink forever. One story, which I think is closer to the truth, was because this became an Army Medical Center, and at the time of World War II the large hospital on our island was not the Army, was not Tripler, was over at Camp Smith and was

Navy, but for whatever reason they decided this was going to be an Army Medical Center and the Navy was mad, and so the only thing they would give us was pink paint, so you know that maybe has more basis in truth.

But the serious issue, the relationship with the medical school, we have a very good relationship with the medical school. They have a new dean, Ed Cadman who came here from Yale University. He's been here about two years now, and we meet, he meets with the hospital executives once a month to discuss the medical school issues. We have students from the medical school, as well as residents, who rotate through here and train with us, so but the medical school here in Hawaii is struggling. They are not financed well; medical education costs, and in fact before Dr. Cadman got here, what was in the newspaper was close the medical school because it costs too much money and we could just get doctors from the mainland to come out here, so he is really struggling to establish the medical school within the 21<sup>st</sup> century, trying to build a new campus downtown in fact, and indeed this joint effort that we have with the research center is an indication that we value our relationship because of our commitment to graduate medical education. So there is a very good working relationship, and I heard him talk about the School of Public Health, and I think they intend to open it up, right?

**COL Takafuji:** He wants to reestablish. Right now it's integrated into the Department of Medicine, but what he would like to do is reestablish it as a separate school.

**MG Adams:** But it gets down to funding; where's the money to pay for the medical school, and he's struggling. He's trying to bring a research base to Hawaii

so he can attract research efforts, which would bring in quality faculty as well as dollars that would be part of research proposals. And that's his way, that's his strategy for refinancing the medical school. He does not want to compete with physicians locally by bringing in medical school faculty alone, because that would interfere with the medical commerce that's already going on here.

**Dr. LaForce:** Is Tripler considered then a Dean's Committee hospital?

**MG Adams:** Ok, I'm not, I have to ask COL Takafuji. Are we considered a Dean's Committee hospital? I don't know.

**Dr. LaForce:** No, because the, for example, VA facilities have a certain distinction that allows them to access resources on in a training way by being Dean's Committee Hospitals.

**COL Takafuji:** I don't think we are that, yet. And part of that is because the University of Hawaii is still struggling. We're just trying to establish their credibility. They have had trouble, and just to give you an example, the University of Hawaii School of Medicine does not have its own library, and it's used the library that was really part of the Hawaii Medical Society as part of its library, and that becomes an issue of accreditation, as you well know, so those are the kind of issues that they're struggling with, that right now are the most important. They have access to Tripler. We have a great relationship with the University of Hawaii School of Medicine, but it hasn't gone so far as to having full access to everything that we have up here.

**Dr. LaForce:** Thank you.

**Dr. Sokas:** Just something that probably builds on what Mark just said, though is that there may be resources within the VA system that would be more accessible for graduate education.

**COL Takafuji:** The University of Hawaii and the Department of Veterans Affairs has a very strong connection, and many of them are indeed cross-utilized, in terms of resources, staff, and so forth. Many of the staff at the VA have academic appointments at the University of Hawaii School of Medicine. Many of our faculty also have appointments there, but the connection is much stronger with the VA.

**MG Adams:** And one of the limitations, even though we are in fact the VA hospital, we do not carry the official designation of being the VA Hospital, so from the VA perspective, they buy care from us, but they could also buy care from Kaiser and anybody else. We do not have deemed status as a VA Hospital. So that's one of the bureaucratic things that I think need to be looked at, so that indeed you would have the ability then to work those issues out.

**Dr. Patrick:** That would also help your graduate medical education process, because there are designated slots for those hospitals.

**MG Adams:** Yeah, right now DOD essentially bears the cost of graduate medical education.

**Col Takafuji:** It really comes down to Congressional priorities too, sir, because from the DOD perspective our first priority is active duty—taking care of your active duty. From the VA's perspective, their first priority is take care of veterans, so when you have a hospital such as Tripler providing support to both active duty, retirees, as well as veterans, what's the highest priority? And you can

see where the conflict can easily arise, so that's something that we're working through also.

**Dr. LaForce:** Except that the VA traditionally has, you know, has sorted on the basis of being service connected, so that you know if it's active duty who's service connected, that certainly makes a great deal of sense in terms of priorities, because that really means that an individual has sustained either an injury or a condition on the basis of being in the service.

**MG Adams:** The key is to be able to take care of all of them all the time, and to de-conflict the systems so we can do the cross-walkings.

**Dr. LaForce:** Right. Yes, John.

**Dr. Herbold:** Could you speak to the command structure for occupational health, environmental health and veterinary services. I didn't see that on your Tripler...

**MG Adams:** Yes, I can. I laugh because I've been trying to change it. COL Wasserman's here, he can tell you about it. The veterinary service, we have a veterinary regional command here that goes throughout the Pacific and their primary mission besides the small animals to the military working dogs and such, is the food procurement in that. The veterinary commander works for the veterinary command, VETCOM out of San Antonio, and me, so the dual responsibility, and that works fairly well. He's kind of in his own world, so to speak, but we overlap, mostly through the component surgeons, because he's part of my component, not component surgeons, USARPAC surgeons' role, so he comes to the table there for the regional responsibilities. There is no linkage in the Army between the veterinary



services and preventive medicine and occupational health. The PM and occupational health mission is accomplished within the medical center. COL Wasserman is the service chief, the department chief, in terms of that product lines now, so the occupational health, PM, is a hospital-based mission, versus the veterinary mission which is external to the hospital. If I was in charge of the world, I think they should come together under the Center for Health Promotion and Preventive Medicine and have a worldwide command with regional responsibilities to support that. I'd also throw the dental into that too in case you're interested. The dentists don't agree with me, the veterinarians don't agree with me, and the preventive medicine community doesn't agree with me. Other than that...

**COL Diniega:** My understanding is that the medical care system on the civilian side on especially in Honolulu is changing rather dramatically with mergers and things like that. Is that going to impact some of the TRICARE aspects that they help deliver?

**MG Adams:** No, it doesn't, it has not affected the TRICARE aspects, and I think that's because this is a managed care community, so no matter who the players are, the same economics are affecting them equally. What does affect us here in Hawaii is the scarcity of some of the medical specialists on island, for example, pediatric surgeon—there's only one here. There may be a couple of others who by virtue of experience or training don't, can't do what we need to do, but there was only one that we could work with, so when I lost my pediatric surgeon, that was a must, they needed to replace him, because I didn't have any other capability. We're right now in a position we're going to lose our interventional cardiologist, and trying

to find that capability on island that I can afford, you know they come very expensive, so that's how it's affecting me in terms of, and it's more just number of providers on island versus any type of reorganization that's going on in terms of the health care delivery system.

**COL Diniega:** I have one more question. Is the, do you think the TRICARE realignment with Alaska going to the Northwest region, will that affect the, the wartime support is still going to come out of you for the Alaska units?

**MG Adams:** Yeah, really it doesn't affect the wartime support, and in fact I don't, when you look at the route from the Far East, from Korea, Japan, is indeed, the preferred route is to go to Alaska. That's shorter in terms of air miles. The reality of it is, there will be probably be airplanes transient in the Pacific, and if they're empty, they're going to bring patients back, so it would be one of those things that we could adjust to, it wouldn't change, you know the capability would still be there, but the preference in terms of the routine health care would be to either move providers to Alaska or bring patients from Alaska down to Madigan, and that, and that would also align Alaska in terms of the regional medical command. Bassett Army Community Hospital works for GEN Farber down in Washington State, so it would align it that way.

**Dr. LaForce:** You have a question?

**Question?:** I used to be in DIA AFMIC and I would go and do country warrior rotation tours, but the medical elements within the embassies whenever they were doing contract care for both the civilians and their military, whenever you would interview with them, they didn't seem like they paid any attention back to any

supporting regional medical center. Now this is some years back. I was curious as to now with the TRICARE Remote that you're dealing with, particularly in the impact stand and those areas, do you get a chance to work with the embassy at all in directing where they're contracting their care. I mean you have a real centered care.

**MG Adams:** We do, we do work with the embassy, but of course, and that's another, it's a State Department bureaucracy but the reality of it is when you go to these remote areas you want to work friendly, and we are doing it, but it's all informal, and in fact now you'll find that in the Pacific most of those embassies are doing, many of them have either nurse practitioners or a physician, but for extended care, for serious illness, they have to use the contractor too, and SOS International, and I don't have stock and I don't know any of their competitors, but they seem to be the guys on the block, and in fact SOS International is now contracting with TRICARE Latin America also to provide services, because they're essentially, they were set up to take care of oil companies and other international conglomerates, and they can do everything to include providing air-evacs, and indeed with the downsizing of the military, there are places where we can't get an Air Force heli-, Air Force aircraft there. And they will also contract with the civilian airlines to move patients and stuff, so yeah there is an informal working relationship. We've talked and said, well gee, maybe if the State Department would work with Defense and we had got a single contract, it would be more cost-effective, but that's as difficult as brokering the deal with the VA, it's kind of you know, well we buy our own and then we try to work together. Yes.

**Dr. Ostroff:** With such a large catchment area and being the referral center for places like Guam, etc., if active duty personnel are referred up here that don't necessarily need in patient care, where do you put them?

**MG Adams:** Most, interesting now the air-evacs system has changed a lot in the last five years. Part of it's because of a decreased availability of aircraft. The Air Force's cargo planes and what they used to use for air-evacs are aging tremendously, so we do not get as many air-evacs now as we had five and ten years ago, and we coordinate it using case management, so we're using an internet program so we know what the patient's needs are, it's identified early, and sometimes we say, hey you can buy this care locally, and you can, places like Japan, even Korea, has western standard medical care, and we've identified those places.

So the first, in today's environment, the first priority is providing the medical care locally rather than putting them on air-evacs. So indeed, and by coordinating their care, case managing them, we essentially make the appointments ahead of time, they can come in, in the morning, maybe seen that same afternoon, and then would leave two or three days from now, as opposed to spending 10 days to 14 days here like they did several years ago. But, and we do have a guesthouse up on the hill where they can stay on site. If that fills up, then they have to go to a hotel, which of course the command has to pay, the sending command, and they don't like that, so we do try to provide the health care first and foremost where people are living, which is a change in thinking. Used to be, you don't have it locally, put them on an airplane and send them.

**Dr. LaForce:** Should something ever really go wrong, for example, between China, Taiwan, and or, I would assume you've got the, you can re-expand to four or five hundred beds fairly quickly here, is that assumption correct?

**MG Adams:** Yes, and no. It would not be fairly quickly, first of all, second we would have, because we've retooled this hospital in terms of ambulatory care, so you still have the medical gasses and you still have the sinks in the room and such. We don't have the beds anymore. They're not in the warehouse. They used to be in the warehouse, but we've given them up. The second, so it would take us awhile to set it up, now you could probably use cots and things and you could have some capability. They key would be the reserve back fill, because 600 plus people would leave here immediately to go over there, so getting the staff in to back fill, that would be the short peg in the tent, I think in terms again, and then have to come from Alaska, from Denver, as well as in town. So I, you know I, if we had to do it, I think within a month we could do it, and that would probably be long enough, because you're going to have a problem with having enough aircraft to get the patients back this far to begin with anyhow, and you've got a hospital, we have hospitals pre-positioned in Okinawa and in Japan that could be taken out of storage and set up either far forward or in the rear, so there's in theater capability, first of all.

**Dr. LaForce:** Thank you.

**MG Adams:** Ok, well thank you for your time and interest. I appreciate it.

#### **SUBCOMMITTEE MEETINGS**

**Dr. LaForce:** No, thank you. Next item on the agenda is the scheduled subcommittee meetings and followed by the executive committee meetings. I'm going to propose that rather than subcommittee meetings, there are few of us, so that

I think that we probably could meet together, if that's ok as far as the board is concerned. And all I wanted to do is to sort of run through the four areas that I thought were areas that we needed to sort of wrestle with and that we might want to start. The other thing is, I really didn't see any reason during the executive committee for people to disappear. I don't think we're going to be talking about you know some nuclear secret or something, so that, please, from the board standpoint, everyone who's here, as long as there's no reporter, those are the only individuals.

**Dr. Sokas:** It will be recorded for posterity.

**Dr. LaForce:** Oh yeah, yeah, it can be recorded; I'm not afraid of that.

**COL Withers:** That will happen anyway. That has to happen anyway.

**Dr. LaForce:** And so, I would say the four areas, and I'm going to dispense I think with one of them right now, the four areas are the continued activities of the board with adenovirus, the question about the vaccine health care centers, that discussion that John Grabenstein presented yesterday, need to spend some time in terms of the question about the Epi research program in DOD which is a question that came up yesterday, and lastly, we need to probably spend a fair amount of time, and Rosy will lead that discussion on the ergonomics issue that came up. Let me begin by hopefully taking care of the adenovirus issue. I have spoken with Dana Bradshaw and Ken Schor, and I do want to spend some time with the Air Force surgeon general in terms of just trying to close the loop in terms of the services as far as the adenovirus story. And again to refresh everyone's memory, there is a \$14 million tranch of funds that is being set aside, and there are current negotiations with vaccine manufacturers, and the contracts are either on their way out or they're

fairly far along in terms of that first \$14 million. When we had our last discussion at the last AFEB meeting, it was clear that that \$14 million would certainly nowhere come close to what that cost is going to be in terms of the preparation of the adenovirus vaccine. So there is a second traunch, and that second traunch is, correct Jeff, I believe it's \$27 million, is that right (Yes, sir). Ok, so there's a second traunch of \$27 million that is now sort of out and about that is going to have to be either approved, voted on or those funds are going to have to be made available.

**Dr. Sokas:** I have a question about that, is it that the contracts are about ready to be let or is it that the RFPs are about ready to go out to work, because that's a whole different level of...

**Dr. LaForce:** Please.

**Dr. Patrick:** If things went well this week, the working, the adenovirus working group was going to work this week and finalize the RFP.

**Dr. Herbold:** So they haven't even attracted applicants yet.

**Dr. Patrick:** There have been two RFIs, requests for information, that went out to industry, and there has been a fair amount of interest, I can't tell you exactly how many, how many companies, so when, assuming the RFP goes out this week, this will not be totally cold, that industry would not have heard of it prior to now. But it's true that we're not really negotiating yet with a specific manufacturer. And the \$27 million, that is what's termed an un, a UFR, and unfunded requirement. That money has not been dedicated, but it's been identified as a request, as a need, to DOD.

**Dr. LaForce:** While that is percolating along, there's still the activity of the IOM and the Academy of Sciences committee that's looking at the issue of vaccines for the military, and specifically at the issue of, not only adenovirus, but the orphan vaccines. I'm not going to spend a great deal of time sort of talking orphan vaccines. I sit on that committee, and Ben Diniega has been at the sessions, and I assume that the next one Ben Withers will be there, but those sessions, to bring you up to date, the plans for that group, as I said before, was to issue an interim report in terms of the importance of getting adenovirus vaccines back on track as far as the military, and that has happened. Even more so, and this is going to be finished off I believe the end of this month--on the 27<sup>th</sup> and 28<sup>th</sup> we're meeting in Washington—and this is the outline for the final presentation that will go back to the Academy and to the Institute of Medicine.

It will be essentially a case study of adenovirus vaccine. That's going to be the lead for the presentation, and that's going to be the lead for the presentation in terms of saying there are other vaccines of importance to the military and there must be a system of accessing those vaccines for either with a, what is it, government owned, contract operated, the GO/CO, I may not have all the words correct, but the adenovirus is an initial story that really should just simply set the framework for pretty, hopefully, pretty systemic decisions that are made, not only just for adenovirus vaccine, but for the half a dozen or so vaccines that you never quite know when you're going to need them. I mean, who knows what's going to happen in Africa, and then all of a sudden there may be need for Rift Valley Fever vaccine, and



as far as I know there's only a very small amount of Rift Valley Fever vaccine at Fort Detrick that is available; none of it FDA approved.

So that's pretty much what's going on in terms of the National Academy of Sciences and the IOM committee activities, and I've tried to keep both the AFEB activities and the IOM activities sort of in synch, so that the presentations at the IOM begin with a briefing about discussions that we've had at the AFEB. Those have been very well received, and in the past, they've thought that there hasn't been enough communication as they develop these blue ribbon panels from the AFEB, so that that's been very useful to again the, this IOM subcommittee. So my read on this is that, I hate, you know my wife says that I always look at life through rose-colored glass, everything's always half full, it's never half empty, but I really feel optimistic in terms of at least the major players seem to be talking about pretty much the same thing, with the same thing being that 1, there is an acute, subacute need in terms of adenovirus vaccine, but that's not just the need. There needs to be again a systemic solution to this issue of the orphan vaccines that are important for war fighters in whatever situation war fighters will find themselves.

So I'm actually pretty optimistic, because I think the total sum that is going to be needed for that enterprise is likely to be somewhere in the \$100 to \$150 million range, which is not impossible. So that's pretty much what's happening now. It is very important though again to make sure that as this second \$27 million in terms of an unfunded requirement comes through, somewhere along the way somebody's going to have to make some decisions and say, yeah, it's going to have to be funded.

And I just want to make sure that from the AFEB's standpoint that we've lobbied and tried to be as helpful as we possibly can in terms of trying to get that done. Ken?

**CAPT Schor:** The question I would ask is that \$27 million, although it is somewhat of a drop in the bucket and you know in terms of underfunding as a defense health program and things like, that if this is a readiness issue, is it well identified as to the source of that \$27 million? Is it going to come out and filter down through the defense health program, or is there an option because it is a training, readiness accession issue for the military, personnel issue for the military, is there a possibility that it may come through the line, that the service chiefs outside the defense health program? I don't even know if that's legal, but one wonders where the pressure points are for that \$27 million.

**Dr. LaForce:** This was an issue that Phil Russell has discussed. Many of you know GEN Russell. He sits on this IOM committee as well, and he has brought forth exactly what it is that you're talking about. What we've learned in terms of looking at this, is if you look at the military procurement system, I frankly have never seen anything more complicated than that, than perhaps the US tax code. And that is the only legitimate comparison that I could make, is trying to compare. And Ben has been at those meetings. When they pick this system with all the arrows and the back arrows and this sort of thing, it is, it is difficult to see how a something like an adenovirus just gets lopped off as the tip of an arrow as you're sort of moving through a procurement system that I understand you now have to go to school six months in terms of just learning the regulations so that you are able to sort of jump into that particular arena. And I think Phil, and again I would never say that I have

anywhere near the amount of expertise, I just don't understand it all. All I know are that individuals at that subcommittee who do understand this much better than I ever will are fully aware of what it is that they're talking about. And they were actually talking about how you pool resources, and then Ben, correct me if I'm wrong, there's an entire funding mechanism that came through GEN Parker. What was that?

**COL Diniega:** You mean for the adenovirus?

**Dr. LaForce:** Yeah, for adenovirus and also the facility that had to do with BioPort, that was the, yeah, help me out.

**LTC Riddle:** What CAPT Schor's talking about is wrong. The DHP, is the Defense Healthcare Program, PA dollars and that's to provide, to procure and to provide healthcare. The, because there's not an adenovirus vaccine on the market, it is an acquisition issue. All of that comes under USDATNL. USDATNL is under secretary of defense for technology acquisition and logistics, so all of that now is shifted over to the acquisition community, who also manages the RDTME and is the DDRE defense research and engineering, and that currently Dr. ? and Dr. ? who have been asked to stay on for a period of time during the Bush administration. So it's not, you know it's not the DHP. I mean, CAPT Schor's right, we're working right now on a \$2 million or a \$2 billion supplemental just to keep the doors open at our healthcare facilities around with up to an \$8 billion shortfall over the '02-'07 POM just to keep the doors open and provide healthcare. But all of this is under ATNL, so of course you have to identify the requirements and the visits to the SGs are important, those kinds of things, but the GO/CO under Dr. Anna Johnson-Winegar and those issues, I think it's important to keep the emphasis in that environment, so

that that facility will produce will other than BW type agents and vaccines, and the acquisition community who GEN Parker, even though he's a physician, he runs MRMC, works on the P6 world, which are Program 6 dollars, but ATNL research dollars.

**COL Diniega:** And the issue you brought up about with the BioPort contract that you were talking about the joint vaccine acquisition program, where they have decided, the department decided instead of at one time, instead of going with a GO/CO at that point, they decided to go with a contractor to acquire the unlicensed vaccines for BW agents, so under the master contract they subcontract certain parts for development, for example Q, fever, vaccine, etc. And the difficulty with that has made them take a look at a government owned, contractor operated facility where they may be able to produce and get licensed products a little bit faster. But that's not scheduled, if I remember correctly, '08 at the earliest. There has also been extreme reticence, and I can understand their reticence, because the joint program office and the NBC defense board for bio-chem issues, all the monies were centralized and the research and acquisition issues centralized by law, by public law, and as people have approached that office to included adenovirus in the contract, they were told politely they couldn't because they're not allowed to do that by law. They have to look at BW agents only and BW vaccines.

**Dr. LaForce:** Joe, did I?

**LTC Riddle:** He makes a very important point is that I don't think that pressure should be let up, at least on the ATNL side, and I'm under the same understanding as Ben is that there has been no resolution as to whether or not this

GO/CO will be able to produce plague, adenovirus, or other things, plague maybe from the BW perspective, but certainly endemic disease threats that we don't have the capability for and certainly our forces are susceptible to. So.

**Dr. LaForce:** From my standpoint I didn't sense that there was any down or any negative side in terms of keeping the pressure. It wasn't like, you know, if you keep the pressure you'll turn off somebody's so that they'll never find it, or something like that. I didn't sense we were anywhere near that, and so I'd preferred to have the AFEB's position as being one that is more out front, more, not aggressive, but more informative in terms of at least making sure that individuals are aware that this continues to be an item at least in terms of vaccine stuff for the military. I would think if not number one, close to number one now, given the base difficulties that we've heard about and also the two deaths that Joe presented to us.

**COL Diniega:** You know parties are, well maybe Dr. Patrick would want to.

**Dr. Patrick:** Yeah, did I hear that this GO/CO that's developed wouldn't actually happen until 2008?

**Comment?:** 2008--that would be the first time they'd have the vaccine, that they'd have money, if everything goes right.

**Dr. Patrick:** GO/CO would actually be implemented within two or three years, something like that, thereabouts?

**Comment?:** With funding in place... facility

**Dr. LaForce:** Build the facility. But the GO/COs, the problem with these GO/COs would be things like the National Laboratories, the Los Alamos Laboratories?

**COL Diniega:** No, no, no. This would be like the place in Pennsylvania where they make ammunition Sweetwater. They make tanks at another place, because it's a government owned, contractor operated facility to produce

**Dr. Patrick:** What I'm searching for is something that would be an analogy that might be more understandable to those people who might need to get behind this, because again we, I'm a new member on the board. This is complex stuff, ok, this is, you know I'm reasonably sharp on the uptake, but it's taking me awhile to understand a lot of this stuff, and I think again thinking the national labs have been extraordinarily successful in moving forward to accomplish what they, and they're government owned.

**Col Diniega:** They don't produce on a regular basis a manufactured product.

**Dr. Patrick:** So they may not be as product oriented as what you're talking.

**COL Diniega:** They do research.

**Dr. Patrick:** But I think what I'm looking for are ways in which, and I'm supporting what Marc's statement here is, how can we keep the pressure on, how can we make this understandable to people who would be positions to actually move forward to dedicate it so it's not a every time this comes up let's reconsider and think of something new again. So I'm trying to find a way to make this understandable to those people who need to know this.

**Dr. Sokas:** I have a question which I need to just for clarification is, is it true, what you're saying I heard is that the GO/CO would not be able to fund adenovirus, because it's, the GO/CO that's being proposed is for bio terrorism, bio warfare. If that's true then maybe we don't want to broaden the recommendation.

**COL Diniega:** I think there, in my conversations with people who are working on this, I think the end, the end goal that people want to see out of this is a national vaccine production center (Yes.) That would include the military and the civilian sector for orphan drugs.

**Dr. Ostroff:** Let me just read a statement from the minutes of their last meeting, the committee that's looking at the GO/CO, says the vaccine production facility is currently designated to address DOD requirements, however there is strong inter-agency support to expanding the concept to address all federal agency needs, including HHS and AID as a national vaccine production facility.

**COL Diniega:** And what is missing at this point is nobody, like you see with the DOD and VA and Medicare issues, is nobody has figured out at this point how the cost-sharing is going to occur, so right now because of the emphasis and the need for BW agent vaccines, that's the push, and then they'll probably try to work it out as it moves along. Cost is the big thing. I mean this thing is very expensive.

**Dr. Ostroff:** Can I ask a specific question about adenovirus vaccine? As one who often looks at the glass as being half empty, you have five letters of intent to respond to the RFP, what in the system is going to guarantee that you don't end up with BioPort again?

**Dr. LaForce:** There's no guarantee.

**Dr. Ostroff:** I understand that, that's the problem. My, you know I remember the JVAC presentation that we had at USAMRID. I mean you know you look at the list of who they collaborate with in terms of vaccine development. I don't

know many of these companies, I mean they're not the ones that I have confidence in, that they can actually produce adenovirus vaccine.

**COL Diniega:** I'll tell you the one of the presentations, that the volume of vaccine needed is so tiny compared to national requirements, you know we're the only people that are going to use the adenovirus vaccine at this point, that the feeling in the group that we discussed this in, is that it is a good start up for a small company to learn how to do the business.

**Dr. Ostroff:** Well, see that's the problem.

**Dr. Sokas:** But that doesn't give you production.

**Dr. Campbell:** That's not who you want.

**COL Diniega:** So you know we don't control who bids on these things.

**Dr. Patrick:** I understand that.

**CAPT Schor:** No but you do control who gets it.

**COL Diniega:** I mean the selection criteria.

**CAPT Yund:** Essentially most of the membership of the adenovirus working group is going to transition into the adenovirus source selection group, it's going to be mostly the same people, and the criteria, which are going to be used to select, I mean assuming there's a selection to be made, I mean assuming we get the number of proposals from the industry, we've thought very carefully about what, what those criteria are. And we certainly, one of the things that's very important to the group is to select a manufacturer that's got a lot of experience with vaccine production, and not a small, a newcomer to the business. I mean we sort of went that route before, maybe five or six years ago, and we didn't get all that far, but there was



a manufacturer who expressed an interest. And there was a proposal, they're in negotiations, and it didn't go very far, partly because they asked for more money than was available, but also partly because they weren't seen as, as a reliable, a good source to go with. So, we're going to be dependent on what proposals we get back from the industry, but assuming there are a number of proposals, an important selection criteria will be looking at a company that's got a lot of experience in this area. So that's, I mean that's something that the group is aware of, and that's one of the high, one of the highest considerations for the selection.

**Dr. Ostroff:** I hope at least one of the five fits that category.

**COL Bradshaw?:** Well, I was just going to say though that I think it's really important to have the criteria there and try and make sure if you can to hedge your bets on somebody that's going to be successful, but I don't think that getting a quote experienced manufacturer is necessarily guarantee, I mean our problem with flu vaccine this year was with ??, and the fact that they didn't have good manufacturing practices and were late because of FDA problems, among other things, and so, that's not necessarily a guarantee that there won't be problems.

**Dr. Ostroff:** Well I can point out that they fixed their problem pretty quickly.

**LTC Riddle:** Have you looked at, has the AFEB looked at the orphan drug legislation, whether or not adenovirus could fall under those requirements? Because aren't there some mandates that are available in the legislative process for the production of orphan drugs that would help a product like adenovirus?

**Dr. LaForce:** Actually it does fall under the orphan drug, but it's, in terms of the sort of funding issues, it really has floated up a bit so that it looks like there are, or there is the opportunity of capturing funds that are more specific for adenovirus vaccine right now. The other thing is, some of us feel that there may be a potential market for this, the solution for this is really to find a commercial market for the adenovirus vaccine, and with the expansion of the college vaccines, and particularly the meningitis vaccines in college students, there's no question any of you who have paid all this tuition money to have a sick kid, you know they go into a dorm and they've got, they're ill for the first three months. They don't go to school, and part of that I'm sure is adenovirus that's circulating within college dorms in the same way that it does in training establishments.

And one of the issues that we'd like to see is somebody to study that, because if it gets studied and it shows that adenovirus does have a reasonably significant disease burden, it's an oral vaccine, it's highly effective, and if there was ever a link between that and meningitis, particularly Group B meningitis, then the problems would be resolved, you know then there would be enormous pressure, people would be tripping over each other to actually prepare adenovirus vaccine, because then there would be a market that would be out there, a market that would guarantee that the military would have vaccine in perpetuity. So I think there are some other avenues that, beyond the ones that we're currently sort of talking about. Nonetheless, the shortest time frame, Jeff when you and I spoke, was that it was about three years, right?

**COL Diniega:** From the laying of the contract. (From what?) From the signing the paperwork.

**Dr. LaForce:** If everything goes perfectly well, so if we double it to probably five or six years. Ok.

**CAPT Yund:** One of the, one of the problems is it's not purely an acquisition, I mean it's in the acquisition realm, but there's some R & D that a company is going to have to undertake, because the old process—the viruses are there, and the viruses are available to transfer to a new manufacturer, but the process of putting the virus into the pressed tablet, that process is gone.

**COL Diniega:** They'll have to get a new license, basically.

**CAPT Yund:** Oh certainly they'll have to get a new license, but they'll also have to re-engineer the manufacturing process and there'll be some R & D involved in that, so it's not simply a matter of flipping a switch and starting up the old process and getting it licensed again.

**COL Bradshaw:** I just wanted to ask a rhetorical question here. For those of those who know the process better than I do, is there a need for, you know Congress is great at being able to sometimes to fence monies for a specific purpose. We have the Defense Women's Health Program, we have things like that that target money for specific purposes. And I guess the question I was asking is whether or not you know we should try to work within the system using existing mechanisms to try and create this, or is there a need for additional legislation specifically to say this is a problem, and this is the way we're going to fix it?

**CAPT Yund:** Are you talking adenovirus, specifically?

**COL Bradshaw:** I'm talking the whole national vaccine program.

**Dr. Patrick:** And, and that's a little bit of the point that I was trying to make. It's essentially end run the system here in some way and attempt to envision the importance of this for all people who really need to know. (That's possible..) Go ahead.

**Dr. Alexander:** I was going to say that's possible. I mean representing the advocacy side here, and we do a lot of work in Washington to secure things like the Defense Women's Health Act. It's a long process and it requires a lot of coalition building up front, and I don't know who would be the lead agency or organization to do that. And it may be something that could be formed through a consortium of interests in vaccine development, that would represent the industry, would represent the non-profit sector, would represent even some government folks who could come together and articulate the needs and the urgency of the situation. And then the strategy would be to build a coalition of legislative interests to really be the backers for this and to carry it forward on a bipartisan platform. That is a two-year process at the minimum. Nonetheless, two years is better than what you're talking about in terms of your timeline and it insures a direct funding stream, so it's not impossible, but it requires getting a champion to carry the torch for you who has resources to mobilize the kind of coalitions that are needed to come together.

**Dr. LaForce:** I wonder if I could ask Steve to comment on this, the reason being that that strategy is a great idea, and the CDC has been very successful in lobbying Congress for earmarks.

**Dr. Alexander:** We don't call it that. We educate, that's educate. I lobby, you educate.

**Dr. LaForce:** No, no, no, that's right. I used the wrong word. No one ever lobbies. That was terrible. Knock my tongue out.

**COL Diniega:** But Marc, you know the budgets are handed down to NIH and CDC in a different manner. I mean it's it goes down directly to the specific program, so that doesn't happen with R & D programs.

**Dr. LaForce:** No, but, my point being was that an educational framework has occurred in one way or another such that earmarks have been established. I can think of the polio money, for example.

**Dr. Ostroff:** Well, I think the better example is small pox vaccine, I mean you know when they...It wasn't any problem to get several million dollars for that.

**Dr. LaForce:** Ok but then, respond to this, respond to this a little bit, in terms of, yeah.

**Dr. Ostroff:** Well, there were many people who were very interested in that issue. I mean basically it became a national security issue, and when it's a national security issue, there are many people interested in national security issues, and it wasn't hard to find that money at all.

**LTC Riddle:** From DOD's side, especially on ATNL, they're allowed to take five issues up, and a \$27 million program is not one of those five issues, joint strike fire, you know that is one of the five issues that would be included on the ATNL side. What Dr. Ostroff said is absolutely key, because it's my understanding that the GOCO and the vaccine production facility on the BW side was likely to be

one of the top national security issues for the new administration. So whether or not a vaccine like adenovirus would be included, because they're looking at the BW capability, is yet to be determined.

**Dr. LaForce:** Rosemary?

**Dr. Sokas:** Yeah, I was just thinking that the Institute of Medicine does a very nice job educating Congress, I mean they can if they want to set up meetings with individuals or with groups, they can brief the House, they can brief the Senate, so it I mean it just takes a little encouragement there, I mean for that one start.

**Dr. LaForce:** Yeah it may be that that IOM may turn out to be a useful mechanism for that, because there's certainly, I mean the interest, the all the knowledge, all that stuff has sort of come together, a brief has already been prepared, it's been circulated out in terms of adenovirus vaccine, it's going to be a case study. That may well be a reasonably appropriate educational format in terms of moving that along.

**COL Diniega:** What I hear about the IOM is that when the IOM speaks, Congress listens.

**Dr. Sokas:** Yes.

**Dr. Alexander:** Well sometimes, sometimes.

**Comment?:** Not necessarily.

**Dr. Alexander:** Not necessarily. It depends, when there are lots of IOM reports that are released that lead to no Congressional action, again it's what machinery is behind the IOM report that then can sustain the energy to propel the legislation forward. The Defense Women's Health Act really was initially the result

of an IOM report with a very aggressive group that mobilized that, turned that into dollars. Steve just made the point that's absolutely perfect, is that what's needed is to get the families of those two dead soldiers together to go testify before Congress, and that will really rattle some cages.

**Dr. Ostroff:** Well, at the very least find out whose Congressional district they lived in (Absolutely), and I mean that's how it works.

**Dr. Alexander:** Yeah, it works, yeah.

**Comment?:** That would be a good way to...

**Dr. LaForce:** Yeah, that's right, I could just see that, some op-ed piece in the New York Times or a Sunday New York Times thing. Oh God, just dreadful.

**Dr. Sokas:** Think about it from the IOM now. Is the committee finished meeting and could it invite some?

**Dr. LaForce:** It'll finish its activities, what this Fall, isn't it (I don't know). I think it's this Fall it finishes, and they're, we're actually going through all the sort of writing stuff. I will have this information for the next, as a matter of fact, why don't I just take that as a task. The next AFEB meeting will be a distillation of what the IOM committee is, how that is moving and also the visits, etc. I do like the idea.

**Dr. Alexander:** My dead baby?

**Dr. Ostroff:** I literally spent the last year, every time there was a dead birds in a different congressional district, we made sure that they heard it from us rather than hearing it from the newspaper so. You get \$25 million for it.

**Comment:** This could, because it's for basic enlisted training (yes), this is a vaccine to take care of the common soldier (that's correct), not the officers (that's correct), so the NCO groups might be, I don't know who you would energize.

**Dr. Alexander:** That's exactly the kind of logic you use to build the consortium, because you need multiple people working multiple groups at the same time so that when it's presented they're all informed and they're ready to take action.

**COL Bradshaw:** I do think that maybe a recommendation, and you know again I don't understand all the money and the manufacturing processes either well enough, but if there is a need for a government owned, you know dedicated kind of, contractor operated, whatever, facility to work on special use vaccines, including BW, you know type agents, and that that same facility could also be you know utilized for orphan vaccines, and there is the CDC and the you know DOD point of view and possibly others, a need for that kind of facility, because certainly the drug companies are not that interested in things that don't make a lot of bucks, and so there if you identify that need and then we can marshal our forces and be pushing from both sides and then maybe get Congress to, with maybe an IOM recommendation or whatever to then be interested in this and say, yeah, we agree there's a need here, we'll put some money specifically to that task. I think that would make it much easier for us in trying to work through our own bureaucracy sometimes to get that done, sometimes it's just easier to do that.

**Dr. Patrick:** And the other two sectors to think we're pulling are the academic research community, if we could find Congressional representatives from



that environment, and the entrepreneurial community, to sort of suggest that wherever this might be placed it could stimulate, you know the local environment.

**Dr. Alexander:** Right, or the big manufacturers, you would not believe the infrastructures they have in place for their government affairs programs, and they are willing to work in the background on these kinds of initiatives, so that for instance, and I don't know who are the potential manufacturers here, but suppose it's a big group such as Merck or Glaxo SmithKline. Their infrastructure is so phenomenal that they can be mobilized to work the advocacy side, to work the media side, to work the hill, in the background in a way, well they do it all the time, it's incredibly.

**Dr. Patrick:** Linda, can you, see any foundation interested in taking the step, the initial step to sort of put some seed money into doing, into getting this moving forward. (The seed money...) No, no, not adenovirus, no the vision of the national production, the national vaccine production.

**Dr. Alexander:** What's interesting in a different issue, we're actually working the vaccine issue on the hill right now, but we're doing it for STD vaccines, you know, the problem is that you know the future for really addressing the problems with STDs lies with vaccines, that our current efforts just aren't working, but manufacturers are reluctant to go that route, and they certainly can't go it alone because of the stigma and the social burdens associated with these vaccines, so the investors are hesitant to invest. So we're building a consortium in Washington and an interest in sort of pooling resources about STD vaccines that would have a global focus, and I'm wondering as you're talking about this if there's a way to marry up these two interests into some bigger package that would be just really an emphasis

on vaccine production, that we need, we need greater government investment in vaccines across the board, and while your interests may be in the bio-terrorism side, there are other groups that have interest in other orphaned conditions that maybe there's a possibility, and maybe our next meeting we might, you know before then pursue some research and see who might be aligned, but this has more potential I think than we realize.

**COL Diniega:** I just want to remind the board the mission of the board is to provide advice and recommendation to Health Affairs and the SGs on, and on specific issues. I think adenovirus went a long time without any action, real action taken, until recently, and there are several actions that have been undertaken specifically for adenovirus. The only, some of the questions remain, long term funding, whether or not you're going to get a contractor that's going to stick with it, which is, there's no way to predict that, and the issue of funding is probably the biggest issue, but there's I think movement in this arena that you know far surpasses the non-movement in the last 10 years. And you know for the board to go around and try to use other agencies, etc., I think then the board has to remember we shouldn't go outside your ring (That's good advice), and be very, very careful, because we have a specific mission.

**Dr. Sokas:** And focusing back on that, I mean I think it's wonderful that Marc's met with two of the surgeon generals so far and is, and you're in the process of meeting with (Yes.), and my question I guess is whether it might be worth it to do a follow-up letter from the board again saying that in light of the recent fatalities we urge you know kind of redoubling of effort.

**Dr. LaForce:** That's no problem. That, I think...

**COL Diniega:** The letter, the letter did mention the one death for sure, and the board expects that you know more deaths will occur.

**COL Bradshaw:** Yeah, I think that if we do that I think we ought to make sure we close the loop with everybody and then decide if we need to do that. I was just thinking about pressure points, is, are we applying them in the right area. I mean definitely we need the support of all the SGs so that when, but if it's the other side of the house though that names the process acquisition, then again that gets outside our, it may be in our realm of influence from the military health systems side, but in a way it's outside of our realm of control.

**LTC Riddle:** When, did you include ATNL as a courtesy copy on that letter, I mean I suggested...

**COL Diniega:** Yeah, you suggested that. And that was done. Now, there's no reason why after they go through a source selection, etc., etc., we can't get Mr. Howell to come and talk to the board on the results, just do a status update once a year or something to keep, so that they know that the board is interested and is monitoring this.

**LTC Riddle:** I think COL Bradshaw makes an excellent point and in those letters is the appropriate pressure points in this instance because it is ATNL, and in other words limited interface between the special health care side and acquisition, technology and logistics, the ASBREM and other interfaces, but to make sure that that community is aware of the concerns of the board, like we did with the courtesy copy of that letter to the acquisition community.

**COL Bradshaw:** The other thing we might do is that the JPMPG could maybe include in its next presentation at the Prevention Safety and Health Promotion Council the adenovirus issue or something like that, we can highlight one of those problems, and that we're going across lines, so I mean that's the problem, we can talk about that in the Joint Preventive Medicine Policy Group. But I also like your suggestion about maybe getting some more, you know research that would, maybe uncover really the depth of the problem, because certainly other institutionalized individuals, whether that's in a dormitory or there was actually some case reports that were out about some kids that died, with disabilities or something like that, but yeah, there were some cases that were confirmed to be adenovirus deaths in other populations, and I think if...

**CAPT Yund:** Those are very likely to be other than types 4 and 7. The adenovirus types that affect young kids are, it's a whole different group of adenovirus types. Well, it's the 4, 7 and 21 that are the ones that typically have affected...

**Dr. Patrick:** Well, certainly college students would be a likely population.

**Dr. LaForce:** A simple serologic study that just starts off with what are the, what's a serologic panel when you start and what's it look like at Christmas break, you know ought to give you some sort of idea as to what's circulating in dorms.

**Dr. Alexander:** Marc, do you have any insight into what's going on with other institutionalized populations such as prisons or, I'm trying to think of what other?

**Dr. Ostroff:** We had a couple of years ago, we had an adenovirus, and I think it was either a 4 or 7 in a nursing home.

**COL Diniega:** A nursing home and they asked us for vaccine. Now, at the last meeting on flu composition, they showed their slides and said we've got all these isolates, and 30 percent we isolated flu, and one of the committee members said, well, what were the others?

**Dr. LaForce:** Yeah, what were the others?

**COL Diniega:** And the answer was we really don't look into it that much, we're concentrating on the flu. However, the DOD does have data, you know because of febrile respiratory illness surveillance looks at other causes, and one of the members from Wisconsin, says, yeah we've been seeing a lot of adenovirus, because their lab was looking for what the others are, so the committee made a specific request to CDC to Dr. Cox that they, you know they'd look for what are some of the other non-flu things that are causing the influenza like illnesses, because they do have that surveillance, influenza like illnesses sentinel sites, so next year it might be a little bit different, and I have discussed the, we in the military have not done, we've done the ARD surveillances during deployments, but we've never gone the next step, which is to look at what the etiologies are, and there are discussions on shipboard, maybe taking a look at ARDs or febrile respiratory illnesses on aboard ships to see what the etiologic causes are and during some of the other big deployments. You know my recommendation to some of the people involved in that is that if we can link adenovirus with deployments or on board ships that gives us a

little more ammunition other than if we include training camps. But the fact remains that the amount of money or vaccine would be used is a small amount.

**Dr. LaForce:** That's absolutely correct, no one would argue with that.

**COL Diniega:** The thing is that one of the other IOM meetings on the vaccine health centers and some of the research issues, there was a representative from Congressman, who got, was responsible for getting the money to CDC?

**Dr. LaForce:** Neal.

**COL Diniega:** Neal, Congressman Neal's office, was there at the IOM meeting, and they presented the reason why they put the money to subsequent legislation, the request for the money, and so I, as far as endemic military vaccines go, there's no Congressional liaison visibility at the meetings I've been, so there's no champion, is what it turns out to be.

**Dr. Alexander:** We advised the DOD Congressional liaison to participate in those meetings.

**COL Diniega:** Well, we don't run the IOM meetings, you know the invitation list is handled elsewhere, but if it comes from Marc as a board member, as a committee member.

**Dr. Alexander:** That might be a strategic observer to have in the back of the room.

**Dr. LaForce:** Why don't I, Dick Miller's been very helpful as we've sort of talked about these, and he's the sort of staff person for the IOM committee, and Dick knows many of you, at many AFEB meetings, and maybe what I'll do is when I get back to Washington next week is just call Dick in and have lunch with him and then

just sort of chat with him, see what his suggestions are in terms of this. Ok. This has been very useful, because one of the, one of the hazards of this is as was correctly pointed out is you can sure jump out all over the place, and then all of a sudden you figure out you've got no business there. So first order of business is making sure we take care of business at home in terms of what is it that we're responsible for, and how is it that we're most helpful there, and if it turns out that something else would not be helpful, then clearly that doesn't serve anyone's interests at all.

So, that, if that's ok as far as the board is concerned, that will be the sort of, the strategy will be one, a continued informational one with the surgeon generals, two, a conversation with Dick Miller in terms of a little bit about the politics and the IOM issues, and probably no other formal communication from the AFEB right now, and let's wait until at least the next session, and I wish I had sort of a fourth issue that had to do with getting some feedback on these other studies in terms of this 66 percent of the other viruses, Ben.

**COL Diniega:** Miss Linda Canas, chief of virology (Oh, yes, she talked to us), at the lab, I've asked her to update the, give a wrap-up for this current flu season to the board at one of the future meetings.

**Dr. LaForce:** Would that be like next May, then do you think, if she could come? Because if she could come in May, that would be a nice closer. We could have discussion there and then...

**COL Diniega:** If we want her there, then she can be there, and that was the plan with all the flu issues is that at the end of the season the board gets an update, and she can present the other data influenza finds, besides influenza finds.

**Dr. LaForce:** Yeah, I think the other person that I chatted with, and whose last name I've forgot, is from Walter Reed, John...

**COL Diniega:** What does he do?

**Dr. LaForce:** He's looked at the relationship between meninges and...

**COL Diniega:** John Brundage?

**Dr. LaForce:** That's it, Brundage, that's the name I couldn't think of.

**COL Diniega:** I only know one John.

**Dr. LaForce:** And I talked to John Brundage about again this relationship, and he's promised to go back and look some more in terms of his files, again this relationship between adenovirus infection and meninges, because if you look at the actual epidemiology that is the basis for recommending the meninges vaccine for the college students living in dorms, it certainly doesn't blow you away in terms of disease burden, and in looking at that, I had the idea that, gee whiz, if there was some linkage between adenovirus and giving and meninges, this might be even a simple way at getting at meningococcal vaccine, and particularly Group B, which isn't covered by any of the vaccines at all.

**Dr. Ostroff:** If I could insert, there is no recommendation from the CDC to give college students meningococcal vaccine.

**Dr. LaForce:** It's strongly advised, no, no, it's strongly advised. Not strongly advised, (giving them information), information, yes. Well, you know what that has led to (I understand that), it's led to almost universal vaccination.

**COL Diniega:** What's the issue with the meninges, now?



**Dr. LaForce:** No, no, it's not an issue with meninges, what I was trying to do was work a strategy, a relationship is talking to John as to whether any information has surfaced at all between a relationship between adenovirus infection and increased susceptibility from meninges.

**COL Diniega:** Well, there are other things because strep is in there, you know, strep infections, there's a feeling, at least in the military community that co-infections sometimes can be symbiotic and intensifying infections.

**Dr. LaForce:** Would it be worthwhile, do you think to ask John to come and sort of summarize that? Again with another way of trying to look at other venues, of interesting people in adenovirus vaccine, or is that too much of a strain?

**COL Diniega:** We can look at it, but remember the next meeting the concentration is the BW threats, so already that will eat up (Oh, that's right) at least a half, if not more than a half a day of the meeting.

**Dr. LaForce:** Because that's going to be at Fort Detrick.

**COL Diniega:** Fort Detrick.

**COL Withers:** The other thing I could do, is, you know I hate to keep beating the end of the drum, again my position is that this is being adequately handled by the Army, and in the great scheme of things it is being handled in the proper priority with everything. But I agree you guys, you the board, need to meet him so anyway, I could invite Mr. Howell, who is the program manager, if you will.

{Transcription: Tape 9}

**Dr. LaForce:** What I did say is exactly what you're talking about is that it's very important to stay within the areas that are appropriate for the AFEB.

**COL Withers:** But I could easily invite Mr. Howell, and he could give a 15 minute.

**COL Diniega:** If there's significant advance. I mean, Jeff, you know, I don't know when you guys plan to do source selection, I mean I don't know what the time table is from here to the end of the year, if there's any movement. Jeff has updated the board, said basically that we're waiting for the proposals and we're going to have a source selection, so if that answer is the same in May, then...

**Dr. LaForce:** The RFP is on the street.

**COL Diniega:** Did you say that?

**Dr. LaForce:** No, there's an RFI out.

**COL Bradshaw:** The meeting this week was to finalize the RFP and I don't know how that meeting went, but if the RFP got finalized, then it could well be on the street before the end of the month.

**COL Diniega:** When do the offers close?

**COL Bradshaw:** Their, our discussions earlier were that it would be at least a 90 day period, maybe longer. And then the source selection were when we looked at the proposals.

**COL Diniega:** When there's further movement, then I think an update would be...

**COL Bradshaw:** You're looking at a six to nine month cycle.

**COL Diniega:** Right. So by May, probably nothing will happen, by September, maybe something will happen by September.

**Dr. LaForce:** Let's close this and take a break, and we'll meet at, how about 25 after 10, and move on to the other issues. Is that too much time?

**Dr. Sokas:** That's too much time.

**Dr. LaForce:** You want just 10 minutes? (I think so). Let's just take 10 minutes.

**COL Diniega:** Restrooms are just down the hall, left for men, right for women.

### **BREAK**

**Dr. LaForce:** Let's get back together...Ok, we're off and running. Vaccine health care centers. The question to us was the issue of the participation in the committee of responsibility, and I've had informal discussions, you know, sort of at lunch and at dinner about this and it seemed like such a, like and I will simply start off, like a splendid idea, and as just a way of improving the networking. I'm going to stop right there and ask for Steve or Linda or Doug or anyone who wishes to comment on the issue.

**Dr. Ostroff:** I think it's a great concept, and it's nice to see it happening, so we ought to support it whatever way we can.

**Dr. Alexander:** How can we, how can we help you in this endeavor? That's one of the questions we often struggle with. What specific steps or verbiage from this group would be most beneficial to you?

**LTC Grabenstein:** The program is, the snowball is rolling, we are in a kind of demonstration phase, you know, build the infrastructure phase. If the network has real value to DOD, then there should be a transition from a CDC pot of money, if it's so valuable we ought to be funding it ourselves, so we're beginning to talk about

getting it into the POM, into the Program Objective Memorandum, for the out years, but Dr. Clinton has been clear that he desires and he senses from CDC a desire for this network to exist you know, many years and to grow in depth as we go.

**Dr. LaForce:** I would propose that over the next month or two with Ben's help we'll sit down and then I'll talk to Steve and we'll see if we can come up with a list of two or three volunteers.

**COL Diniega:** Before you do anything right now, the next meeting you'll have the hard question. The CDC, what they've done, is take a few members from the HCIP, three to be exact, and named them, and there's discussions as to what they should be named because of the Federal Advisory Committee Act, they want to be able to not adhere to all the Federal Advisory Committee Act regulations, so all we would need is the names of three volunteers, and the executive secretary would be the executive secretary (Super), and then. we can work it out.

**Dr. LaForce:** All in favor.

**All:** Aye.

**Dr. LaForce:** Ok, done. Finished John?

**LTC Grabenstein:** Just so I get it clear in my own mind. We have a choice between the subcommittee and the working group approach, and I'm not trying to get around, I mean I am trying to get, I'm trying to reduce burden on the committee and maintain flexibility which kind of argues toward that working group model, rather than the subcommittee, announce it in the Federal Register model.

**COL Diniega:** Why don't you let us handle that part (Fine). Right now in the charter there are three subcommittees named, and the difference between a

working group and a subcommittee is the need to announce, and the need to run the recommendations through the parent committee, so I think the CDC would like to get away from the FACA rules also, so let John and I work that issue. All you need to do is give the names, and we'll work the questions from there.

**Dr. LaForce:** Ok.

**Dr. Ostroff:** I mean, especially when you're talking about a team. As you all know ACIP attracts a lot of attention, and any subcommittee meetings under the ACIP group would get a lot of attention.

**COL Dinega:** And then it's very hard to close a meeting.

**Dr. LaForce:** If you want, I was a member of the ACIP I guess about 20 years ago. It was, this was the ACIP met a room, what half this size, just a little conference room in back of the CDC director's office, at that time, it was a small conference room. Up there were 20 people that made up the ACIP, etc., and the last meeting I went to at the ACIP was about oh I don't know a year and a half, two years ago, it was in an auditorium. It was in an auditorium, they had, poor people, I walked in and said, what the heck is this? And so I share your concern about this, that this isn't just a bunch of words, it really is important.

**COL Diniega:** The only other thing I would ask, and John would ask too is this is a subcommittee that would be looking at vaccines and side effects a lot, so that's the expertise we need is in that.

**LTC Granbenstein:** As opposed to policy.

**Dr. LaForce:** Correct. Ok. Thank you much. Ok. I want to spend a few minutes, because I think we need to spend a few minutes on the document that was

circulated entitled: The Case for Re-Establishing the Epidemiological Research Program in DOD. I'll be very honest with you, this caught me a little bit by surprise, this document, because there was no formal question that is being asked of the board in terms of this, and historically this issue was presented and discussed a bit by the board, it would have been almost two years ago, as I recall, with COL Hoke's presentation, and then at the time Dennis Peirotta was the president of the board and if my memory serves me correctly we generated a note or a letter back saying that the board was supportive of certainly a continuation of this sort of global surveillance activities, or do I have that wrong?

**COL Diniega:** Yes.

**Dr. LaForce:** Ok.

**COL Diniega:** A little bit, not all wrong. Dr. Hoke gave an informational brief to the board on the military infectious disease research program, where he talked about all that they were working on. The issue of epidemiological research did not come up at that meeting, and the board made a comment and provided a letter of support for the military infectious disease research program. This issue was not an issue that was discussed at that time, but it was a support for the program as, the whole research program in infectious diseases as was presented to the board. This issue is a very hot issue among the services and the, and there's an entity called the Armed Services Biological Research Evaluation and Management Board.

ASBREM. The B, did I get the B right? As Bio-field, and in that there are joint technical coordinating groups for infectious disease that involves all the services, so they've been rather vehemently discussing this issue in detail, and the flag officers

are involved in this issue, and the flag officers being a combination, are they all two stars, Rick, or are they a combination of one and two stars?

**LTC Riddle:** Oh, no, a combination of the lower ranking individuals, the one star so far, but two GEN Parker.

**COL Diniega:** Right, so it's currently being discussed, and I don't know what the resolution's going to be, but there, you know, the two camps are we don't have enough money, or we don't, it's not a product line, we don't need it, we're product focused, versus information is a product. I would say this is an issue. The services are trying to work it out. The flags are involved. And I'm not so sure if you were to step in at this point the question would be, well you weren't asked. The other issue is...

**Dr. LaForce:** Let me start off by saying why weren't we asked?

**COL Diniega:** Because the ASBREM and the JTCGs was the right forum, they're trying to work it out, it's like the JPMPG trying to work out a lot of issues at their level, and some of the issues we work on don't get to the AFEB.

**Dr. LaForce:** Yeah, no question about it, but it would seem that given the fact that this is, that this is you know I would say an important issue, likely to be a contentious issue, and I would just think it would be appropriate to have some sort of reading on the part of the AFEB. That's all. I'm just speaking from the point of view of again the scope of the charter of the AFEB. Let me go first with Ken and then John.

**CAPT Schor:** Just a quick comment, and that may be to answer your question specifically why weren't we asked may be as much an issue of knowledge

of the AFEB and what it can and cannot do and what its functions are by all the services, and through all the levels of the services. Perhaps the AFEB is not as well known amongst the Naval services, and I don't know about the Air Force, I won't speak for them, but it may not be well known as to what the AFEB does or can do, I think it's very focal, very, knowledge of the AFEB is perhaps not well disseminated throughout the Navy medicine per se, so that may be a marketing issue within our service as much as anything.

**Dr. LaForce:** John?

**Dr. Herbold:** Yeah, let me, let me try to talk to two or three disparate ideas just to get them on the table, and hopefully it will emerge as being coherent. I've been around some of these rack and stack processes before, and I'll be quite blunt, I'm called an epidemiologist, but I'm not sure what that, what the definition of that word is, and it you know means so many things to so many different people and in the past it's been a prejudice with NIH funding if it's called an epidemiology project while it's not quote basic research, and I'm really talking to the Program 6 commanders here, there are two, so sometimes it might be, it might be the word that's the problem, but there are two thoughts that I want to surface here. I think what you need to do when you're trying to decide what products to pursue, you need to continue basic understanding of the natural history of that disease process. And lots of times understanding the natural history of that disease process involves the ecology and epidemiology from the agent's point of view, you know from the virus's point of view rather than from the human point of view, so maybe if it was worded something like a natural history studies to help frame what products can be pursued.



And the debate 20 years ago about why were there two malaria vaccine initiatives, one Army and one Navy, and they were looking at different aspects of the life cycle of the parasite, and from the scientific perspective they were very valid, but from the Congressional staffer looking at two budget line items it made no sense, had the same name. And then the other point that I want to kind of wedge in here is in my mind it really doesn't matter how much money is allocated to natural history studies, epidemiology studies, but having it as an authorized part of your program, gives you the, allows you to pursue these. So say that it's just \$100,000 that's ponied up each year. At least it opens the door, and then that would give you the ability as a regional lab commander to leverage that, you have the authority to do it, so you could leverage with other national agencies, with NIH, with host countries, to pursue epidemiology studies or the natural history of disease, so I don't think we're asking for a lot of money to be put against it, and I'm actually asking a question, but just to have the authority to be able to pursue some of these lines. You know people worry about the deep hole of, the one I'm best aware of is Agent Orange and the \$120 million that we've sunk down that hole in the last 21 years, you know that's a lot of money.

**COL Diniega:** Well, we were funded, if you remember John, when you were at Health Affairs and HIV came and nothing was known, the military took the lead in looking at the natural history of HIV infection, and the money, I don't recall where the money, didn't the money come from the research side of that? It was all Program 6...

**Dr. Herbold:** Part of the story, and let me share this, because this is where the board needs to walk lightly. I was telling somebody the story, we were over at Bethesda, CAPT Vern Shinsky and LTC John Herbold were standing over at the Naval research unit there, and GEN Rapman was standing two steps above Shinsky and I. Shinsky is a pretty big dude, for you all who, and Ratman read us the riot act about why, why we got messed up in HIV funding streams, because a dole for that year, that \$6 million was a plus up. He saw the future that it was going to devastate his \$40 million infectious disease R & D budget, and so he didn't like two guys from Health Affairs meddling in his R & D business. That's a true story.

**Dr. Shanahan:** Can I throw something in here too. I've been very quiet because I'm a new kid on the block, but this happens to be a little bit of a hot button item for me, because of more my history than anything else. As a former medical R & D laboratory commander I got involved with this whole issue about epidemiology and the services, and there was something very insidious going on through ASBREM and the JTCGs I believe, the five working groups that basically did the footwork for ASBREM, and that was the starting about when this came in, in the mid-90s, early 90s to mid-90s, epidemiology became a bad word, and there was a very insidious movement within that group essentially to eliminate all funding for anything epidemiological. I don't know, I'm not saying that it was a conspiracy or that it was cognizant, but for some reason that group had a bias that epidemiological was not important, and it was wrapped around all these issues about no product and all this kind of stuff. The argument I made till I was blue in the face was that epidemiology should be the basis of all your programs, I mean how do you identify problems, how

do you prioritize your research without doing basic epidemiological research, in its broadest sense, John. And I'm not just talking about the infectious disease program. At that time we were trying to get in injury as being an important issue within the military, and now as we heard, you know there are occupational issues related to musculoskeletal disorders, but how do you deal with these issues if you don't have a well-established epidemiological program?

And I'm not sure whether that's really within the purview of this board, but I think the board needs to be very aware of the fact that these programs are very fragmented. To the extent that they exist, they generally exist because they're driven by personality, a person who wants to do that kind of work and has found an environment where he can do so for a limited period of time, but I think one of things that this board can do is try to look at some of this long view in terms of I think the DOD needs to get on track with some kind of coordinated, cogent, epidemiological program, and I don't know really how, I haven't figured out exactly how we can play that role, but I think we need to be aware that this problem exists and try to do what we can to see that this trend is reversed.

**Dr. LaForce:** Rosy?

**Dr. Sokas:** Yeah, I mean I think that if the Armed Forces Epidemiology Board was enough on the radar screen to have the whole program presented to it, that the reason that this question most likely wasn't brought forward is not because people didn't know that it existed, but that it had the word epidemiology in it and people weren't looking for that answer. And it's a little late in the day to have to sort of say well the first paragraph in any chapter in Harrison's is epidemiology basically,

that's what that is, but it's not unusual, I mean even within CDC the definition of research for research grade promotions has to be fought out each time that epidemiology matters, I mean amazingly enough, so it's probably not outside of our charter to say yes, epidemiology matters, yes, it's a legitimate form for research, and yes, it's a building block on which other forms of research should be you know built, so anyway.

**Dr. Shanahan:** It saves money too, because if your research program is anecdotally driven, and I have to tell you, a lot of DOD research is, at least in the medical side, is anecdotally driven, it's costing a lot of money, so there is an argument that it improves the efficiency, and as I say the other thing I would stress is that epidemiology is not just bugs, and it needs to be addressed in the broader areas.

**Dr. Patrick:** You say the charter of this organization is simply to respond to questions, but I mean what else would happen if you get a room full of epidemiologists together, but that they step back and look at the big picture and say well, what's the context of that question, and I think it only makes sense that we would, if we're the Armed Forces Epi Board, that we would wish to draw a box around the context of epidemiology in the Armed Forces and say what's happening in research, what's happening in you know x, y, and z, and if we're not seeing it to be curious as to why not and what's the appropriate balance between these things and what not. I mean what else can one expect in getting us together. To my mind this is, it would be very, it would be appropriate for us to be curious, and to not just wait for this question to be asked. If we heard that this was happening, we should raise this as a policy issue, and suggest that this is a critical issue.

**Dr. LaForce:** Greg.

**Greg?:** Yeah, I mean COL Diniega is right, it's kind of a hot issue. We've fought this battle back and forth for, for several years now, and the Hepatitis C studies is maybe a good example, because there were no infectious disease, epidemiologies available from MIDRP. I had to steal that money from the DOD/VA shared research money working directly through DDRNE, as opposed to being able to go through the MIDRP and execute infectious disease research dollars to do an epidemiology study program looking at information as the outcome, saving millions of dollars a year, and so CAPT Hines has thought it's an insignificant program, a million dollars a year out of MIDRP, but the issue is really money. In other words, the P6 community, because it is a gray area, they argue that they primarily fund 6-1, 6-2, and 6-3, which is basic science, laboratory, product-driven research, they want to push the responsibility for doing this work onto the health care community. The P8 side of the house does fund some research. We're responsible for the clinical investigations research, but the majority of our effort is providing health care, but GEIS is funded out of the P8 side of the house, and we execute some of the Congressionally mandated research, but we do through the P6 side, and so they move towards a product-oriented focus, looking at vaccines primarily in the MIDRP, even though they're doing some drug work and some malaria work, and when they made their cut, this program fell down more than the cut line two or three years ago. We use, in other words, to me, the differential that we use is the GEIS work and some of the other work is somewhat hypothesis-generated, but when I need to put a protocol together and I need to go through an IRB, that to me is the cut line as to whether this

is P6 or P8 and that goes into the P6 community and that should come from the research dollars, but it is a hot issue. Dr. Magguski himself has written a couple of letters to the P6 side and to COL Hoke and GEN Parker saying you know we do not support the elimination of this program. I think we've tried to resolve it in-house, like Ben just said, but unless you know what's going to bite you next, you have no idea what product line you need to develop, it's just you rob Peter to pay Paul now, or you spend your money producing the Hepatitis E vaccine when you've never had a single case diagnosed in a US serviceman, you know that kind of stuff.

**Dr. LaForce:** Yes.

**Dr. Alexander:** Learned something in Washington over the last few years, and that is that if you beat the drums in the same rhythm all the time you lose momentum, and that means that sometimes words really do make a big difference. And I don't know this landscape well enough to know if epidemiology is in or out of favor, but I have learned that there are other ways of saying things, and if you keep an eye on the available pools of resources and frame what you're doing with their logic, you're more likely to be successful. And I don't know if this is a biological threat assessment endeavor or if it's a, I'm actually serious about this, or if it's some sort of action that can be framed in a military readiness mindset or something that the emerging biological threats, the words really matter. We've learned that we can't, in our area we can't make any effort in STDs, but I can make a lot of headway in infertility prevention, and it's the same stuff, it's just framing it in a way that's appealing to those who have resources, so I would encourage you to step back for a moment and you know really scan the horizon, see where the funding interests lie,

see what's politically palatable this year, and if it's something that is really desired, frame it in that context and still maintain the integrity of what you're trying to do, but don't be afraid to be creative, it really pays off.

**Dr. LaForce:** Ben?

**COL Diniega:** A couple of comments. One is, I think at the end of CAPT Campbell's presentation yesterday, I think he was certainly leaning towards working through Jeff Yund, CAPT Yund to get a formal question to the board, and I think that was pretty obvious when he said, tell me how to do it and we'll get you the question. Number two is, in 1997 I used to represent the commander of the AMEDD center and school at the Biomedical Technical Area Review and Assessment Committees where they reviewed all the medical research programs, and at that time the acting acquisition guru was Dr. Johnson, Anna Johnson-Winegar, and the whole issue of epidemiological research came up, again, and then there was a reluctance at that time to fund it as P6, some people said it was P8, operational dollars, etc., but I think if I'm not mistaken the current acquisitions guru, Dr. Closser in biosystems is leaning towards funding epidemiologically related research.

**LTC Riddle:** What we did, we, know when the initial Gulf War studies we had to steal dimes and nickels to fund those Congress mandated a \$20 million program element, and we've been able to convince the ATNL community to maintain a \$5 million program element, and all of this work is funded primarily epi work, and now with that \$5 million we're focusing on Force Health Protection issues and we fund Greg Gray and his outfit out at NHRC, and that's probably our strongest epi capability on the research side within DOD. This program here is really focused

on infectious disease epi, and so I mean we have made some inroads, I mean when you look at the guy that was there before, Dr. Anna Johnson Winegar, I mean he would kick you out of the office, we were able to make some inroads with Dr. Anna Johnson Winegar and then with Dr. Foster there we've been able to continue that and make some increased inroads. The problem right now is with MRMC and with the JCTG and especially with MIDRP, I mean they have been cut to the bare bones and they are working product oriented. And I think CAPT Campbell was right, I mean the big issue is, does information that comes from epi work fall under the definition of 6-1, 6-2, 6-3 within the P6 research community. We would argue definitely, they would argue absolutely not.

**COL Diniega:** I would suggest that what we end up doing with this is that CAPT Campbell works with CAPT Yund to get a question to the board and it be discussed at the JPMPG so that all the services are aware that this is coming to the board, and then when the question does come that the board be given the opportunity, or the players in this arena be given the opportunity to present their case to the board, be it one side or the other.

**LTC Riddle:** Dick Miller, if I'm not mistaken, that COL Hoke out at MIDRP funded the IOM to additionally take a look at MIDRP and the program management, and I would talk to Dick on this issue, and if you have lunch with him it would be another good issue, because he believes wholeheartedly the way that the board believes that here, that it's an integral part of MIDRP.

**Dr. Shanahan:** You know I personally urge that when the question comes to us that it be worded in the broader context than just infectious disease.



**CAPT Schor:** And that's sort of what I was saying. This is sort of a gap analysis in a sense, as I read it, I haven't heard this presented. My sense is that when you get into this 6-1, 6-2, and I don't pay much attention to that, and I'm glad Rick does, but you know I think the broader issue for a committee that doesn't have any vested interests from a perhaps a monetary sense, is sort of the articulating the needs and then the needs can have different prose put on them according to what the political winds of Force Protection in the post USS Cole world, that sort of thing. But that's again a service issue to articulate those kinds of things, and but I think the needs assessment in identifying the broader needs assessment and say, you know GEIS doesn't answer everything, product doesn't answer everything, what is really you know some unmet need.

**Dr. LaForce:** Ok. Let's close this. I think Ben's summary would certainly be my summary as well, that we look forward to Captains Campbell and Yund working with JPMPG in terms of preparing a proposal to the board, and I would say that if there is a question that looks at quote unquote "re-establishing epi research program in DOD", there is no question more appropriate for the Armed Forces Epidemiological Board than this one. This is why I was so taken, so you know we look forward to that, and I think that would be a terrific discussion, and at least having a chance for the board to review, discuss, and hopefully render some sort of useful opinion. Ok. Thank you. Ergonomics. Rosy.

**Dr. Sokas:** Well, I just thought it would be useful for us to talk through some of the information that's here, and Mary Lopez is, COL Lopez is here. The board did ask for some specific information, including a recommendation for an

action plan, which clearly a lot of effort has gone into with a lot of detail that would be useful for implementation. I guess what I'd like to do is think about and ask some questions, some clarifying questions about major issues, because we heard an important one yesterday about whether or not we need to disarticulate some of the military versus civilian concerns. I have to say for example when reading the gap analysis for the OSHA ergonomics standard that much of it doesn't apply to DOD, that much of it, to the military parts of DOD, that it rather applies to the civilian parts, and that merging of them doesn't seem to provide clarity in that area.

The other question I have is, it looks to me as if the responsibility is fairly clearly service-specific, and that the ergonomics working group is in fact a support group, if that's accurate then, ok, so that helps clarify it as well in my own mind, since that's what I'm trying to start with here. Then, having said that, there are a couple of little comments I'd like to make, one of which is I think Marc got it absolutely right yesterday, as far as I can tell, the Navy ergonomics plan very clearly articulates specific goals and assigns responsibility and provides outcome information, so Marc's question yesterday was really why don't, why doesn't everyone just do what the Navy did, because the Navy seems to have gotten it right, and if you've got a little bit of time maybe we could talk about that.

A minor point or question I guess that I have is that for, for most of the priorities and gaps analysis one of the other questions that the board had was on, I think on prioritizing, I may not be getting this right, sources of data, and that the data information within DOD was a little bit of a problem. Now it looks like the Navy has kind of addressed that and that the Navy does look at injury and compensation

data, maybe not perfectly in every regard but that the major central pieces are to get somebody who's responsible to look at information and to make decisions on purchasing and implementation that would impact the overall outcome, and if that's the case, then we just need to follow the Navy, and if it's not the case, then I guess, why don't I just stop there and ask about the Navy program and to what extent that would be a model for the other programs, and then maybe we can just open it up to other questions people have.

**Dr. LaForce:** One of the questions I have before we go any further, the Navy program again a lot of the work was largely in the civilian aspect, as I recall.

**CAPT Schor:** I would think so

**Dr. LaForce:** The thing that concerns me, initially when we discussed this, there was the sense, and for new board members, we've been trodding over this for awhile, it was again the thought that this could in some way be linked together, and the sort of feeling that I'm getting is that it probably is not going to be linked together, and that you're looking at just the organizational aspects work a lot better in terms of the civilian issues versus the actual military issues, and I need some, and in conversations I had with Rosy yesterday, one of the questions that we said we just need some feedback from you all in terms of making sure as to whether we're getting that right.

**LTC Lopez:** Yeah, I have a lot of the same problems that you have with the military and the civilian. It does channel down in the civilian sector a lot better.

**Dr. LaForce:** But you have had actually have a reporting system, you've got a financial system, you've got a way that you can track what it costs you in terms of

ergonomic issues in terms of the civilian sector (FCE Claims). Right, right that's your database, that's what you've analyzed, and that's what you start from in terms of trying to either make changes or doing what it is that you want.

**LTC Lopez:** That's right.

**Dr. LaForce:** What's the matter? You look so uncomfortable you're making me uncomfortable.

**LTC Lopez:** It's the military-civilian disparity. I mean in recent years they've put a lot of emphasis on military and mission readiness and the message that I'm getting from the military side is if it's addressing military readiness then we're going to get attention from the commanders and the resource managers; if it's addressing the civilian side, it's not as significant. I mean it's there, but you know some civilian activities can be contracted out, and so it's not an integral thing we should be focusing on, so I've been trying to balance it both ways. I mean it's more of a you know, we've been talking before about our target audiences and getting the attention and framing the message so that it gets the interest like STDs versus infertility treatments, and so if I can address military and get the civilian in there too then I have more chance of success.

**Dr. Sokas:** But that seems at odds with the fact, I mean those two statements seem at odds. The one statement that all of occupational health has really been focused on the civilian sector, and the civilian sector has the OSHA 200 now, OSHA 300 logs in place, the question is, is the Navy doing a better job for the civilians already than the military, in which case you might not need to worry about, I guess that's the fundamental question: how accurate is this description, because it looks

wonderful. Not that it looks like the report on the Army looked like people were really trying and the questionnaire was really useful and having people think it through, but it didn't quite look like it had the basic pieces in place and as thoughtfully used as this report seems to indicate. So first of all I guess the question is, is this true for both military and civilian within the Navy.

**LTC Lopez:** It does mean civilian yes.

**Dr. Sokas:** Ok, but also for military?

**Dr. LaForce:** No, no, no, that's the point.

**Dr. Sokas:** So then, then you're concerned about targeting military readiness and bringing the civilians along, isn't really necessary because the civilians in this piece look like they've already been addressed, so I think what we're hearing is two different opinions, and I guess it would be useful to hear other people's thoughts on it. I think we're hearing the opinion that the civilians are addressed, and then the other side is that the military, the civilians are being neglected or the military's being neglected, and I guess our question.

**CAPT Schor:** I think there's probably very scant data about these sorts of injuries for military members, in the Navy anyway.

**Dr. Shanahan:** Or in any service, because they're not collecting that kind of data. You literally have to go through ICD codes to try to sort it out, because there's not a similar system for military injuries, and/or you know they appear at sick call and they're treated, but there's not a claim made, workman's comp or anything similar, so the active duty aren't going to have the same sort of thing. The other

thing to keep in mind is the Navy programs I understand is a pilot project held at one or two different places, it's not a system wide program, is that right?

**Dr. Sokas:** Well, if you...

**CAPT Schor:** They piloted the major places like Norfolk and San Diego, I mean that's where, huge ship repair facilities, huge industrial bases, huge aircraft repair facilities that are heavy composite materials and heavy industrial rework processes, I think they've plucked the main, the main targets.

**Dr. Sokas:** And just for a question on that, the organizational authority that's outline under responsibilities here, is that Navy wide now, or is that just in those pilot facilities.

**CAPT Yund:** I think that's just in the pilot facilities.

**Dr. Sokas:** Ok, ok, that was unclear.

**CAPT Yund:** This is a problem that military has with injuries of other sorts also. We do not have a unified way to collect, a unified, standardized way of collecting injury data. For example in the Navy, and I think the other services are like this to a degree, we have a pretty good system for collecting, for collecting detailed information about incidents where somebody's killed or more than a million dollars is, a million dollars of resources is lost. And then another way of collecting information if there's more than five days of work time totally lost, but that the reporting is seen as onerous and many times that five days of lost work time, that's frequently fudged and people are put on light duty, they don't do much for a couple weeks, but they don't lose any five whole work days. This is a problem that the injury and occupational injury prevention committee under the PISHPC or PUSHPC

or however you want to say it is wrestling with, but there's no, there's no good system in any one circus, and there's certainly no standardized system across the services, for collecting injury information in general.

**Dr. Shanahan:** The Army does in fact have a system, but it's grossly under-utilized, and that's the VA, what, 285 reporting system, are you familiar with that?

**COL Diniega:** It's not comprehensive.

**Dr. Shanahan:** It's a reporting system where commanders are supposed to report injuries that don't require hospitalization.

**Dr. Sokas:** Collected under the ...

**Dr. Shanahan:** Yeah, it's supposedly collected under CINC's so there is at least a rudimentary system available within the Army, but I don't remember the origins, whether it goes to other services or not, but it's, but it's not utilized, I'll tell you that for sure.

**Dr. LaForce:** Ken?

**CAPT Schor:** Yeah, I don't know if this is on target or not, but I, let me use an analogy. I think it's ok that Canada has a parliamentary form of government and Great Britain also. I think it's ok that the United States has a different form of government. I think you know the civilian stuff going to the, the base commanders, correct me if I'm wrong, the base commanders are more and more responsible for the checkbooks of their civilian workers, so it's a big deal for those base commanders. You know we have operational commanders that in the Marine Corps that outrank base commanders everywhere, so they work very closely together, so then, it does come together at different points, it's still a different system, and I guess what I'm

trying to say is it seems to be probably ok in that sense. We may need to improve those individual systems. We may need to be able to work on some of the things like I'm trying to do some research on with the Preventive Medicine resident is to try to characterize active duty musculoskeletal injuries better and dig through the VA system and VA codes and all that kind of craziness, and maybe we can bring those kind of incremental improvements, and I'm not so sure that you can kind of make it all one system from the top down, I think they're still going to be separate, and I think they still may need to have separate sort of outcomes and ways of measuring and all that because the infrastructure's there and to change that infrastructure's probably going to be very costly.

**Dr. Sokas:** Let me just ask a question. To what extent are the tasks that are being done the same for the military as for the civilians? To what extent are the back injuries by nursing you know shared by those civilian and military nurses or are they different tasks and have different risks with them?

**LTC Lopez:** It really depends on their location, because there are some bases that have civilian mechanics and military mechanics doing exactly the same things, and then you see exactly the same kinds of injuries and the same kind of problems, although demographically the civilians are usually older than the military and the same with the nursing staff, but when you go out into the field and do some military specific things, that's when you really see the disparity.

**Dr. Sokas:** Well, I was thinking, that if, for example the prototype that's been tested by the Navy would be implemented more broadly then it looks as if it would pick up and include acquisitions and process changes that would, you know



once a problem's been identified prevent those, so for at least where those two groups are merged, and it may even, I don't know if it would also be possible for some of the data collection, I mean the OSHA 300 logs are not onerous to you know tick off, really, whether that could include military as well as civilians for example, you know as a question, I don't know, or do they ever? Probably not.

**CAPT Schor:** They get their care different, they may get their care in the same building, sometimes.

**Dr. Sokas:** But the care doesn't matter. The OSHA 200 log can be filled out by a secretary at the front desk, it doesn't have to be a you know the result of a medical diagnosis, you just tick off, was somebody injured, did they go to clinic, and was it you know on the job. I mean, I'm minimizing it a little bit, but it doesn't have to be real involved, so that would be a potential question, I don't know.

**Dr. LaForce:** What about the issue that was brought up yesterday, and the impression I got when I was looking through this last night, one of the issues that I was struck at the presentation yesterday was the tremendous variability that was discussed in terms of what happens ergonomically. It may be a safety officer in one area, it may be I don't know, but as I recall COL Lopez you mentioned three or four different individuals, and then I was sort of talking about it, and I was talking out loud and my wife really sort of cuts through things, sort of asks me, she says, so what, why don't you leave them alone, if they want to do it one way in one place and it works, fine, fine and so I ended up then rethinking my question and sort of asking myself, is it a problem, the fact that there is differences in, on different sites in terms of who's responsible for ergonomically related injuries, I mean is that itself a

problem, or is it not? And if it's not, then ok, fine. And I didn't have enough data to sort of answer Nancy's question.

**Dr. Patrick:** My naïve approach on this is that yes, it's a problem if they're speaking a different language or working to different indicators (Ok), and it was in part my suggestion is perhaps the best thing to do here is to attempt to make recommendations that clarify the indicators that are to be sought by certain periods of time, and then allow the complex system to do it in whatever way it chooses to do it, because again we do have this misalignment between you know the agencies that are really responsible and funding sources and what not, so if at least the indicators, the outcomes can be clear and some objectives, some measurable objectives by when those outcomes should be attainable, at least people are singing from the same hymnal. And I think that speaks to what you're saying, Ken, is that it is going to look different, and yeah different people slice their fish different ways and I think it can also get to a point of ultimate resolution of these problems, but again clarity of data collection about what's happening, clarity of the indicators, measures to be used, etc. are really the key.

**Dr. Shanahan:** But you know too the reality is that particularly in this area one of disease or injury identification and definition is a huge problem, and that's something that's going to have to be worked out too, but I would also suggest that OSHA has done that for you. I mean, there's a lot of question also as to whether these, some of these injuries are in fact workplace injuries, but I think if try to go up too much off of the OSHA definition, you're just opening up a can of worms that's

number one not solvable, and number two is going to be very expensive to do, so maybe OSHA, the current OSHA law, which I haven't read, is the way to go.

**Dr. Sokas:** Well, I mean just the, I think the heart of it is to simplify, to simplify to make it as easy as possible, to use whatever information is easy to access, and not to worry about how precise it is, because really the OSHA stuff is totally imprecise, I mean it really, it's just meant to be there to be simple, if three people in an area have elbow pain, you should worry about elbow pain maybe, and you should send somebody out to look and see what they're doing. One person does, I mean, so the idea is to take simple measures and to just get a feedback loop developed. The critical piece is the feedback loop, that somebody reports something, even if it's a self report, even if it's just through you know a corpsman or something and it gets onto a piece of paper and that paper is fed over to somebody who can then go out and take a peak at the site, and that goes back into a follow-up loop so that it doesn't just kind of sit, the recommendations just don't sit, so as long as you have that kind of a feedback loop in place, it doesn't have to be really sophisticated, and it doesn't have to be fancy, I think that's kind of the goal.

And I do think you can probably separate out and make do with available information if you can, and again the suggestion that was made in the past, that maybe picking back injuries among nurses as a way to trial out to see you know how it works, and there's wonderful best practices available. The VA has all kinds of stuff, both research and stuff that they pass out to their people that they're free, that it's easy to get a hold of, and I'm sure you already have all of that. The other thing I would suggest in just going through this, is you don't really need OSHA approval for

the different pieces, I mean they've got tons of information on their website you can just grab, and I would also suggest separating out where you have in the, one just general comment for the policies, it's useful to have priorities maybe in bold or some sense of what needs to get done first, but when you talk about the major pieces, musculoskeletal disease management is really no bigger a piece for OSHA than any other part, and in fact the number one priority is really management commitment, so I would separate that off, the whole issue of case management is important for clinical activities, but it doesn't, case management it needs the same kind of communication back and forth as we're talking about with primary prevention, so in that sense if you do have a feedback loop, if you can say this person can go back and there's an adaptable job that they can go to, you know that kind of thing, it does help you drive your numbers down, it helps you drive your cost down. because you can't make, you're not capturing your costs, you might not need to spend a whole lot of time there, and I would kind of make that almost a separate initiative or separate support information just so that your main points are clearer and what you're providing then as a support working group are access to the training materials, access to the recommendations about case management, all those pieces. Those are products that you're providing because they're going to be useful, but they don't have to be in your main listing of what your priorities are going to be.

**Dr. LaForce:** Could I also ask...what? I'm sorry. Yes.

**Dr. Campbell:** I'd like to draw an analogy between what we're doing here and what OSHA tried to do and the resistance that OSHA got by all the industry. Industry does not like to be told what to do, and the more specific the requirements

are, the more they dislike it. They do like the end product of reducing injuries and work related illnesses and how to get them to go along with a government mandated program is a real tricky thing. I think one thing that works is allowing the individual sites, or the individual commands, flexibility to design their own approach to this, I think is a really helpful one, and I think the way OSHA's ergonomic standard is working is because it is somewhat vague and allows some flexibility on the part of industry, but I think the more chance you give the commands to design their own product I think the more likely we are to have something like this to succeed. But I think you need to get them to acknowledge that the end result is very much in, a very good thing, I mean they're reducing people out of work and out of readiness, so how do you get them to understand that and work for it is made more possible by allowing them to approach it in their own particular way.

**Dr. LaForce:** The other thing is Colonel in looking at the action plan that I commend you, I mean this is really complete and right on. I looked at it and I said is this a fairy tale? Yeah, you've got these dates February '01, all of this stuff and I'm looking at this and I'm saying this is impossible, given the sort of presentation, and so if I'm from Missouri, and I'm not, but if I looked at this and I said what's the likelihood that this working plan, because one of the charges was to, was for the board to actually look at the action plan and either comment on the action plan or vet the action plan, and I had trouble with that because the action plan was so complete it looked like it was impossible to do, which means to say that I don't have any disagreements with anything that you've proposed, I agree with it, but it's the dates and the translation of that that I was asking myself, I said gee whiz, how is that going

to be possible, given the sort of information that we already have. So I find myself in sort of a conundrum, I don't know about the rest of the board members, but I looked at this and I said oh gee, this really sounds great, great. But I'm not sure that the process was far enough along to be able to sort of look at this, at least from my standpoint, with any confidence. Am I misconstruing something?

**COL Withers:** Well, would you recommend that she relax the dates or lop off those details?

**Dr. LaForce:** I would suggest that, well, both, no, no, I just sort of go back, yeah, yeah, that's what I said, I would just ask.

**Dr. Ostroff:** My comment when yesterday was that you know make sure you have your taxes done before April 15 because many of your deadlines are April 15 that are on here.

**Dr. LaForce:** Ken?

**CAPT Schor:** Well, you know, just one comment, one question. The comment is maybe it's appropriate for the board to say it's ok to eat an elephant that doesn't have a very good corpus colosum between the civilian and military. Eat that elephant one small bite at a time, so to recommend that maybe it's better to look at one focal thing like back pain in nurses and demonstrate some success, that's the comment. The question is, could the board then also recommend two, three, four, real honest-to-God outcome measures as the areas to nibble at, and to throw at the commands to say I don't care how you get here, but why don't you see if you can give me some data that goes along that line?

**Dr. Patrick:** I turn that back around, and I like the notion of slicing, of the narrow slice, finding a few problems and then coming up with some indicators, but could you suggest some indicators that you think would fit this timeline, that you think might affect the do-able period of this timeline? Because I, obviously again there's a lot of thought to this, it's really detailed, and I respect that, so you thought some of these were attainable in some way, give us some suggestions about what could be attainable, maybe some, kind of a buffet list of indicators that might be appropriate for this. To me this is, it's like the objectives for the nation for health, we're not going to accomplish this over night, it's going to take a period of time, and it's going to take a lot of heavy lifting on the part of a lot of people to do this, so let's get started, set some objectives, and try and reach them.

**Dr. Sokas:** Ergonomically sound lifting.

**Dr. Patrick:** Yes, some ergonomically sound heavy lifting. Yeah, and so, again I want to be very supportive as a board to being, to not, to let's get some traction in this area, let's really try and do it, and if you could perhaps come back, and again I don't know perhaps it's best to come back with maybe a handful of indicators that might really show measurable progress in this, then we'll find out what's working and what's not.

**Dr. LaForce:** Would it be, ok, the response after the last meeting was, the recommendation was to consider dramatically reducing the model scope to a single ergonomics related injury category. Ken, I really wonder about whether you might want to you know take that on in terms of either just, the last time we talked about back pain, which seems to be a very common, very debilitating, very expensive

proposition, and I wonder whether moving from the generalities that are here and of which I have no disagreement with any of those, but in terms of trying to be far, far more focused in terms of picking one of these.

**Dr. Sokas:** And if you took the back pain, could you use the five-day away from work criteria, because maybe it's robust enough for that one.

**Dr. Patrick:** I would suggest, Marc, my only modification would be that I think there's been so much thought put into this already here, I would attempt to try and find two or three different problems that might represent avenues that really have to be influenced, perhaps something that relates to people at risk for back pain, but then maybe there's another area that's distinguishable enough from that that's an important area for an entirely different class of people, and maybe try to identify that as well, so that we're you know beginning to get some experience with enough different areas.

**Dr. Sokas:** And I have again a question for, well for COL Lopez and for the people who are bringing these questions to us, I hate to keep answering questions with questions, but is the civilian component important enough that it would be worth hearing from the Navy, you know from the person responsible for the Navy program about whether that's going to be further implemented throughout the rest of the Navy, what the, you know kind of a, a brief evaluation of the pluses and minuses of this particular program and whether it's useful for other services. That, to me, that would be very interesting. It may not be interesting if you just want to focus on military and not on civilians, so it's an open question.



**LTC Lopez:** If I can go down the list of questions, and hit all of these. First of all on the dates on the thing, you're right that some of it might be overly optimistic. Part of my problem was that we were be driven by the OSHA standard and we wanted to have some things in place and established by that 14 October magic date, and some of these things are in progress now, I mean we have the technical guides and I know they need some tweaking. In terms of the service policies, I know that's going to take a little bit longer to get them staffing, but if we can get the ball rolling in that way then I think just as CAPT Schor said, we're taking small bites of an elephant. So what I'll do is go back and re-look at the dates and see what is realistic and probably fudge those, but I would like to keep as much of that, the detail in there if possible, because that gives us a longer term plan and targets to fulfill.

In terms of the indicators, I think that the severity rate really has the most promise, and the IOIPC also is looking at that severity rate, but I really would like to see that severity rate decline, to not only talk about lost work days but also limited work days, and this is a bit of a, I guess a philosophical problem. We can establish a very good outcome measure, even though the data systems don't support it, so what happens if we establish this outcome measure that helps drive the change in the data systems, I mean what's the problem with that? We can go and say this is a good measure, everybody agrees this is a good measure, we need to do this differently so we can support that. I mean, this is my logic, and I think that that severity rate measure has utility for several other groups in terms of occupational health and preventive medicine. So I'm willing to climb down to really one good outcome

measure other than other than instant reward, we've got that, but the severity rate, and the definition of severity rate to include lost work time and limited duty time, I think will show some promise. The other outcome measures are just process type measures that just look at program elements and if you're doing the right things, it's more of a basic checklist, but severity rates I think the best outcome measure.

**Dr. Patrick:** I would say though that some of those process measures that you're talking about could be very important. It's in part what Rosemary's talked about, about the closing the loop thing, and it may require drilling down into that a little bit. It's not just a do you have it, yeah. Finding someway in which you can really get a sense of what the determinants of that system are and actually get an honest and accurate answer as to whether or not that system is there and functioning and so it's a, you know a lot of people say, oh yeah, we do that, but it's a tough thing to really find out whether that's happening, so, good, establishing that...

**LTC Lopez:** Then the other one was the single product focus, project focus. I am in total agreement with that because that depth of information is going to really build a case and get the attention and help with the marketing, but I'm also in kind of a quandary because as you pointed out you want, even though people are doing things differently, if processes are the same and outcome measures are the same, then that's good, so that they can communicate among the services and among the programs and there's some consistency. We're kind of under a time crunch and OSHA's standard is driving attention, so if I focus all the attention on a single project and I don't focus on program development and standardization and communication, then I lose an opportunity to have that consistency, and I, so I'm

trying to balance it, I mean I agree we need the depth, but we also need the breadth so that we have, again, the consistency. And timing is everything.

**Col Diniega:** Why would it not be ok to have the overall action plan but the implementation be done in phases with the first phase being a focused implementation?

**Dr. Alexander:** That's also an opportunity to use it as a pilot to gauge you know issues on the fiscal side, and the personnel side and the communication side and do an after action report on that, that could then lead to greater understanding.

**COL Diniega:** Then the action plan can be, then the action plan can be revised as you finish with the focused implementation phase.

**Dr. Alexander:** Exactly.

**Dr. Sokas:** Because really to follow up on that, the OSHA requirements are very miniscule when you actually look at what's required. Your action plan goes into far greater detail than that would be needed, and so maybe what you could do is sort of have a couple of phases where the bare minimum that's required, which is really creation of a loop, is in place first, and then for the details you could have two prong, one is just to create information that people can use if you know they want to pick different projects, but for the one project you've really gone after, have those training materials and all the other in place, purchasing equipment, you know issues addressed, you know all the specific.

**Dr. LaForce:** Does that sound reasonable?

**LTC Lopez:** Yeah. You had two other points, one was the data systems, and I think we've already identified most of those gaps, but I would like to address

the Navy. The true advantage I think in the Navy is that they clearly identified it as a line response and tagged that commander. Their models are good, but they can be tailored to individual commands, and again I think that's a thing that should be emphasized.

**Dr. Herbold:** But how can it not be aligned responsibility? The one thing that I mentioned, forgot to comment on in the briefing it might just be a perception thing, but there were no, there were employee, there were employer responsibilities, but there was no briefing chart that talked about employee responsibilities to wear their gear, to take breaks when appropriate, to report pain in your carpal tunnel or, you know I didn't, talk about closing the loop, I didn't, you know it can't be a medical responsibility.

**LTC Lopez:** Well it is built into it in (training) terms of reporting and saying yeah no problem.

**Dr. LaForce:** Ok? All right then, we're 35 seconds over, is that all right?

#### **ADMINISTRATIVE REMARKS**

**COL Withers:** Quite all right. Here with minimal delays, you can go to the bathroom quickly if you need to, but let's just go down to the lobby to the first floor, then straight out the front to the flagpole, and we'll assemble there for a picture, then we'll come straight back in to the mess hall, which I think is on the first floor, but I'll, we'll get some help in going there, and then we'll eat, if you haven't, I think everybody's paid me. I'm sorry to say this, but I need another dollar if you...I'm about 12 bucks short, because I forgot for the donuts and stuff, so if you can add to it

to any degree, please give me another dollar. I can get that later at the dining room.

Don't worry about that right now. Thanks.

**Dr. LaForce:** Ok, the Winter '01 AFEB meeting is adjourned.

\* \* \* \* \*

The Winter Meeting of the Armed Forces Epidemiological Board  
adjourned at 11:55 a.m. on Thursday, 08 February 2001, Tripler Army Medical  
Center in Honolulu, Hawaii.